

## **Ex. 3**

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1 UNITED STATES DISTRICT COURT  
2 SOUTHERN DISTRICT OF NEW YORK

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3 UNITED STATES OF AMERICA

4 v.

19 CR 096 (JSR)  
Daubert Hearing

5 SYDNEY SCALES

6 Defendant

-----x

7 New York, N.Y.  
8 July 13, 2021  
3:00 p.m.

9 Before:

10 HON. JED S. RAKOFF

11 District Judge

12 APPEARANCES

13 AUDREY STRAUSS

14 Acting United States Attorney for the  
Southern District of New York

15 FRANK J. BALSAMELLO

MATHEW ANDREWS

16 ANDREW CHAN

Assistant United States Attorney

17 SHER TREMONTE LLP

18 Attorneys for Defendant Scales

JUSTINE HARRIS

19 ELIZABETH JANSZKY

MICHAEL TREMONTE

20 ALSO PRESENT:

21 CLAUDIA HERNANDEZ, Paralegal Specialist (USAO)

22 ALARA HANCI, Paralegal Specialist (Sher Tremonte)

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(Case called)

DEPUTY CLERK: Will everyone please be seated, and will the parties please identify themselves for the record.

MR. BALSAMELLO: Good afternoon, your Honor.

Frank Balsamello, Mathew Andrews and Andrew Chan for the United States. With us at counsel table is Claudia Hernandez, a paralegal in our office.

THE COURT: Good afternoon.

MS. HARRIS: Good afternoon, your Honor.

Justine Harris, Elizabeth Janszky and Michael Tremonte. With us is Alara Hanci, a paralegal in our office, for Mr. Sidney Scales.

THE COURT: Good afternoon.

We are here on the pretrial motions filed by the defense, and the first one is the motion to preclude cell site evidence which seemed to me to call for a Daubert hearing.

Who does the government want to call as their witnesses?

MR. BALSAMELLO: The government is prepared to call multiple witnesses this afternoon. Would you like us to call first or would you like a summary of who we're calling?

THE COURT: I'm sorry?

MR. BALSAMELLO: Do you want us to call someone first or do you anticipate --

THE COURT: Who do you have altogether?

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1 MR. BALSAMELLO: The first witness, Andrew Petersohn,  
2 he's an engineer for a company called DBM Engineering, his own  
3 company. He has consulted for and worked for  
4 telecommunications --

5 THE COURT: That's good enough. Let's get him on the  
6 stand.

7 MR. BALSAMELLO: Good enough. The government calls  
8 Andrew Petersohn.

9 ANDREW PETERSOHN,

10 called as a witness by the Government,

11 having been duly sworn, testified as follows:

12 DEPUTY CLERK: State your name and spell it slowly for  
13 the record.

14 THE WITNESS: My name is Andrew Petersohn. Andrew,  
15 common spelling. Petersohn is P-E-T-E-R-S-O-H-N.

16 THE COURT: Counsel.

17 MR. BALSAMELLO: Thank you, your Honor.

18 DIRECT EXAMINATION

19 BY MR. BALSAMELLO:

20 Q. Mr. Petersohn, where do you work?

21 A. DBM Engineering.

22 Q. What is your title?

23 A. I'm a radiofrequency engineer. I'm also the president of  
24 the company.

25 Q. How long have you been president of DBM Engineering?

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1 A. 16 years.

2 Q. What generally does DBM do?

3 A. We provide a variety of design and compliance-related  
4 services to the telecommunications industry.

5 Q. I do want to get to the substance of your testimony  
6 quickly, but if you could give the Court a brief description of  
7 your educational and employment background as it relates to the  
8 field of radiofrequency and cell site design.

9 A. Sure. I have undergraduate and graduate degrees in  
10 electrical engineering from Lehigh University. I'm a  
11 registered professional engineer in New York State as well as  
12 six other states.

13 And I have been employed with my company now for 16  
14 years, and prior to that with -- directly for some of the  
15 other -- some of the wireless providers, including Nextel, if  
16 anyone remembers them, the company that is now Verizon  
17 Wireless. At the time it was called Bell Atlantic NYNEX  
18 Mobile.

19 I've also worked as a consultant in the offices of  
20 Cingular Wireless, which then became AT&T. And with my firm  
21 now I serve all of the major operators of cellular  
22 communications as well as that entire ecosystem of  
23 subcontractors.

24 Q. Are you a member of any professional organizations or  
25 associations?

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1 A. I am. I'm a member of the National Society of Professional  
2 Engineers; also, the Pennsylvania Society of Professional  
3 Engineers, Valley Forge Chapter.

4 Q. Have you testified as an expert before?

5 A. I have.

6 Q. In what field or fields?

7 A. In the fields of radio frequency design and engineering.

8 Q. Do you have experience reviewing and analyzing service  
9 providers' cell site location records?

10 A. I do.

11 Q. Have you been asked to look at specific records in  
12 connection with this case?

13 A. Yes, I have.

14 Q. What providers records did you look at in connection with  
15 this case?

16 A. I looked at the records of T-Mobile, Sprint and Verizon  
17 Wireless.

18 Q. For what geographical area?

19 A. The West Farms area of the Bronx, south of the zoo.

20 Q. Were there also a couple of locations in Manhattan that you  
21 looked at?

22 A. There were, yes.

23 Q. What time period approximately, what years?

24 A. So end of 2016 and the middle of 2017.

25 Q. Do you have an opinion as to whether analyzing such records

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1 allows an analyst to draw reliable conclusion about the general  
2 area in which a phone was likely located at the time of a cell  
3 site connection?

4 A. I do, yes.

5 Q. What is your opinion on that?

6 A. My opinion is that, generally speaking, an analyst can  
7 determine the area of the device was located when there is a  
8 connection made to the cellular network through the use of the  
9 call detail record.

10 Q. Tell the Court just generally why you believe that, what  
11 sort of principles you rely on, and then we'll speak about each  
12 of them sequentially.

13 A. One of the fundamentals of any wireless network is that for  
14 the most part the terminal or the phone or end user equipment  
15 will connect to the closest site with some exceptions, but that  
16 is due to the fact that the closest will generally be the  
17 signal that is present to the phone that is strongest and most  
18 clear.

19 THE COURT: Explain the science of that to me. What's  
20 the physics of how this works?

21 THE WITNESS: Sure. So the physics is based on the  
22 Friis equation, F-R-I-I-S. And in that equation there are  
23 some -- there are some constants. However, the driver of that  
24 equation is what's called free space path loss, and on a  
25 blackboard when we look at that equation, the free space path

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1 loss will --

2 THE COURT: That's interesting, but that's not quite  
3 what I meant.

4 So, let's start real basic. How does a cell phone  
5 connect with a tower? Is it through waves?

6 THE WITNESS: Yes, radio waves.

7 THE COURT: And these are waves emitted by the cell  
8 phone?

9 THE WITNESS: By the cell phone and by the tower.

10 THE COURT: And how do they connect?

11 THE WITNESS: So each, you know, the base station  
12 equipment, which is the cell tower, has antennas, and the phone  
13 also has a set of antennas. Those antennas turn the electrical  
14 energy in each of those devices into radio waves that will  
15 propagate, and the power of those radio waves will decrease  
16 with the square of the distance.

17 THE COURT: I've often heard people say that a cell  
18 phone will connect with the tower giving the strongest signal.  
19 What does that mean in terms of how the waves operate?

20 THE WITNESS: So because the signal strength falls off  
21 with the square of the distance, it's a rather quick decrease  
22 in strength. So, generally speaking, the signal that reaches  
23 the phone strongest is going to be from the closest site.

24 Now, there is potentially an area of fringe coverage  
25 where there could be two sites that are equidistant, and in



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1 theory the signals should be equidistant in strength, and so  
2 you could be in the middle of some coverage areas.

3 THE COURT: So what about intervening obstacles like  
4 buildings?

5 THE WITNESS: They certainly play a part.

6 THE COURT: I mean, again, forgive my simple  
7 mindedness, if you go down to the garage of this building, and  
8 you attempt to use your cell phone, good luck. Once in a blue  
9 moon, it may work. And that, I'm guessing, is because the  
10 waves from wherever the nearest tower is do not penetrate down  
11 to that depth through the concrete and all the other obstacles.  
12 Would that be a fair assumption?

13 THE WITNESS: That's correct, yes.

14 THE COURT: Okay. So, here I am out on the street or  
15 in an apartment in the Bronx, and I want to make a call, and  
16 there are lots of buildings because this is New York. So if  
17 the geographically nearest tower is blocked in the way we just  
18 described, the signal would then seek out another tower. Do I  
19 have that right?

20 THE WITNESS: That's correct. Or the other tower's  
21 signal may find you.

22 THE COURT: And how far away could that other tower be  
23 if there were no -- this is an overly simple model. Let's  
24 assume there are all sorts of blockage to the nearest tower and  
25 there's no blockage to another similar strength tower. How far

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1 away could that second tower be?

2 THE WITNESS: It really depends on the area that we're  
3 talking about, which is why it's very important that you study  
4 the area in which these call detail records are. And as long  
5 as that's a somewhat homogenous area, all phones rise and fall  
6 with the presence of environmental and manmade clutter.

7 So, in the incidence which described where you're  
8 below a parking deck, all of those sites that are trying to get  
9 down there are subject to the concrete and steel of that  
10 building. And it would then rise, and in this case fall  
11 together, and you would still likely connect to the closest  
12 site.

13 In the second situation you described, again, if  
14 you're shielded from one way to the site, it's very likely,  
15 again, in a homogenous-type area, you're going to be shielded,  
16 somewhat at least, to the site in the other direction. So  
17 you'd never have -- again, in a homogenous area like we're  
18 talking here in the West Farm section, you would never have  
19 this extreme imbalance where we would say have a blockage on  
20 this side, complete blockage, and then a direct line of sight  
21 to the tower that's now further, it would be very unlikely.

22 THE COURT: Supposing the cell phone emits its waves,  
23 and there's a tower close by that is partially blocked but not  
24 totally, and there is a tower that's not blocked at all that's  
25 giving off an even stronger signal. Which one of those two

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1 would the cell phone likely connect to?

2 THE WITNESS: Well, it would be very -- it would be an  
3 abnormal situation to have a tower giving off a stronger signal  
4 the way you've described that would perhaps overcome the  
5 distance and that would play into that role. Generally  
6 speaking, the providers like to balance the load in a  
7 homogenous area so they are going to set up --

8 THE COURT: You're saying in the normal course, the  
9 towers would be of equal strength?

10 THE WITNESS: Typically, that is the vanilla type  
11 of -- with some notable exceptions, let's say, in a ballpark  
12 scene.

13 THE COURT: Let's change the hypothetical. So now  
14 there are two towers both in a general area. One is closer but  
15 there's a partial blockage. The other is a little further away  
16 but without blockage. And as I understand it, the cell phone  
17 connection would normally go to the second of those two towers?

18 THE WITNESS: It's very possible in that situation.  
19 But certainly still to that first tier of sites. I think  
20 you're now describing kind of you're in between maybe in the  
21 fringe area there but still closer to site A, but site B has  
22 better line of site to you, then certainly you could connect to  
23 site B in that case.

24 THE COURT: So, again -- and I only had freshman  
25 physics, so I'm very ignorant of this -- but what causes in the

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1 hypothetical we were just discussing the cell phone connection  
2 to be to the unobstructed tower? What is physically going on  
3 there?

4 THE WITNESS: Well, in that case you'd have -- if you  
5 can see -- if your antenna on your phone on your device can  
6 actually see, has line of site to antennas on the unobstructed  
7 to complete line of site, then the signal that is reaching you  
8 is only going to be subject to free space path loss, whereas  
9 the other site that may be closer is now going -- the signal  
10 will still reach you, but it may have to penetrate some glass,  
11 some steel --

12 THE COURT: I guess what I'm asking is, what causes  
13 the tower signal and the cell phone signal to connect?  
14 Physically what happens?

15 THE WITNESS: The radio waves will -- let's say you're  
16 receiving a phone call --

17 THE COURT: The radio waves come together so they  
18 become a single wave?

19 THE WITNESS: No. There's a lot of handshaking that  
20 goes on when we are making a call. Let's say we're receiving a  
21 phone call, the network is always kind of in touch with your  
22 phone. We don't record this information because it's not  
23 useful for billing, but the network is always aware, generally  
24 speaking, of the area you're in. So, when someone tries to  
25 call you, there's a paging signal that's sent out on the

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1 transmit path from the tower, so that your phone is going to  
2 then receive that. It's going to say "I'm over here, I'm  
3 seeing this, you know, tower A with best strength." The system  
4 is then going to allocate a control channel to you on tower A  
5 and then set you up on a voice channel after some paging and  
6 handshaking, and your phone rings, and there's a ringback tone  
7 on the other end. You pick up. So all this handshaking goes  
8 on over the air with this back-and-forth, transmit and receive,  
9 transmit and receive.

10 THE COURT: So on my cell phone, and I suspect on  
11 yours, there's a little thing that shows by bars how strong the  
12 signal is, or how weak. So if the connection to the nearest  
13 tower would, because of obstructions, show two bars, and the  
14 connection it made to the slightly farther away tower, but less  
15 obstructed tower, would show three bars, why does the signal go  
16 to the three bar? What causes it not to go to the closest one  
17 even though it won't be a great connection as opposed to the  
18 further one that will be a better connection, if that's what  
19 happens.

20 THE WITNESS: The cell phone and the network are  
21 constantly monitoring and reporting what tower we see not only  
22 strongly but more clearly, so less -- better signal to noise.

23 THE COURT: So it's programmed to seek out the best  
24 connection?

25 THE WITNESS: Yes, that's one of the fundamentals of

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1 these networks is that the device seeks not the closest but the  
2 best connection, and that can also -- there could also be  
3 traffic loading that comes into play there. You may have a  
4 close site that's the best, strongest, clearest, but may be  
5 loaded, in which case you may be shed to the second closest,  
6 but never really out of that first tier of sites that surrounds  
7 you. It would be very rare.

8 THE COURT: If there are a bunch of towers, how do you  
9 know which one, if you can know, which one it's connecting to?

10 THE WITNESS: When you ask that question, do you mean  
11 as a user or as a --

12 THE COURT: No. No. No. So I am making a call on my  
13 cell phone, and all I know is the call goes through. But what  
14 I don't know is which tower it's connecting to. And in my  
15 hypothetical, maybe there are three towers in the area. So is  
16 it that -- is there a document or a recording, I should say, at  
17 the tower it's connecting to that says, yes, you've connected  
18 to this tower?

19 THE WITNESS: There is, and that takes the form of the  
20 call detail record.

21 THE COURT: How is that physically made, that  
22 notation, so to speak?

23 THE WITNESS: It's recorded in an automated fashion by  
24 the provider, and it's done mainly for billing purposes.

25 THE COURT: Okay. That exhausts my questions for the

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1 phone. Go ahead, counsel.

2 MR. BALSAMELLO: Thank you, your Honor.

3 And you covered many several of the topics that we  
4 would so I'm going to try to not repeat anything here, but  
5 maybe supplement a little bit.

6 BY MR. BALSAMELLO:

7 Q. Mr. Petersohn, you alluded to a principle that phones are  
8 trying to connect to the closest and clearest signal?

9 A. Yes.

10 Q. Why is that?

11 A. Well, if that weren't the case, we could never have the  
12 advanced networks or even the primitive networks that we can  
13 all remember with bag phones and car phone boosters. It is a  
14 fundamental requirement that these devices connect to the  
15 strongest, clearest signal, and that's because one of the  
16 premises of the cellular network, the reason it's called a  
17 cellular network is because each facility is designed to cover  
18 a cell, a geographical area that surrounds it.

19 With sectorized sites, which is typical of  
20 three-sectored sites, that cell will look like a hexagon in the  
21 direction that the antennas are pointing, and there will be  
22 three cells around a site. If we go back to the Eighties when  
23 sites were predominantly omnidirectional, that cell was more of  
24 a circular shape around it. But, nonetheless, the facilities  
25 are designed to cover that geographical area and just a little

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1 bit more, that way we can have handoffs between sites. That  
2 way, when you drive away from site A, you can connect to site  
3 B, so there's that overlap.

4 But without that fundamental design, we would never be  
5 able to reuse frequencies and reuse codes to allow for the  
6 leveraging of the assets in terms of the frequency spectrum  
7 that the operators have to work with.

8 Q. Are there industry-wide standards for how that is  
9 programmed into devices? And, if so, just explain what those  
10 standards are.

11 A. There are. And the standards are iterative in the  
12 technology that has matured over the years. We've all heard of  
13 5G, 4G, 3G the analog technology had a set of standards. Then  
14 the second generation had a set of standards.

15 The 3GPP is the standard setting body now for wireless  
16 communications. 3GPP is actually a unification of seven  
17 standard bodies that are comprised of folks from industry,  
18 folks from academia and research, and they are the ones that  
19 are setting the standards by which not only the phones are  
20 designed but also the radio equipment network and some of the  
21 core switching network. All those standards that are  
22 promulgated to the industry are set by the 3GPP.

23 THE COURT: I'm back with another question.

24 So supposing that there's a recording at the cell  
25 tower indicating that a call was connected from phone X. And,



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1 again, to make it simple, let's assume there are no other cell  
2 towers in that area. How do you determine how close or far  
3 away the cell phone was to the tower?

4 THE WITNESS: Well, that would really require  
5 knowledge of what the rest of the network looked like. So, if  
6 we know that cell X was a sectorized site. It had three  
7 sectors to point in distinct directions in the horizontal  
8 plane, and we know that the call was on, let's say, the  
9 northeast sector, we would look to the northeast and see what  
10 the next tier of sites was, where was its closest neighboring  
11 site to the northeast.

12 And if, let's say, that neighboring site --

13 THE COURT: So would it be a function of you would  
14 have to know how strong the -- where the cell tower was  
15 located, how strong its signal was, what obstructions, if any,  
16 there were. Anything else you would need to know?

17 THE WITNESS: You would need to know where its  
18 neighboring sites were.

19 THE COURT: I'm sorry?

20 THE WITNESS: Where its neighboring sites were.

21 THE COURT: Where the neighboring sites are, okay.

22 So, if -- again, to simplify. So supposing -- let's  
23 take something that's not part of this case. Let's take an  
24 open field, and there's a tower there, and there's a recording  
25 that indicates that a cell phone call was made to that tower.

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1 No obstructions. No other cell towers. How far away or how  
2 close could the cell phone be in a tower of the sort that had  
3 the same strength as the towers involved in this case?

4 THE WITNESS: So, if this is an island site, if you  
5 will, in the middle of the field of no neighbors, and  
6 unobstructed --

7 THE COURT: That's why this is a hypothetical.

8 THE WITNESS: Right.

9 -- an unobstructed view, that would depend on the  
10 height. But let's just say it was an average tower height. In  
11 that type of scenario, which is really -- it may have existed  
12 years and years ago, but it doesn't really exist much any more  
13 in none of the areas that I work. But if it did, I've seen  
14 connections upwards of five miles in propagation.

15 THE COURT: In that extreme case, which we all agree  
16 is not the situation here, but am I right that you wouldn't  
17 know whether the call was made from ten feet away or five miles  
18 away?

19 THE WITNESS: That's right.

20 THE COURT: Okay. Go head, counsel.

21 BY MR. BALSAMELLO:

22 Q. Mr. Petersohn, have you done any testing analysis that has  
23 allowed you to see what cell site a phone was connecting to at  
24 any given time?

25 A. I've done a lot of drive testing, yes.

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1 Q. Explain what drive testing is.

2 A. Drive testing is a regular practice by the cellular  
3 providers where they will actually drive their network for a  
4 variety of reasons. Typically, a performance type of drive is  
5 what's done in an area that maybe needs some improvement --  
6 maybe there's some dropped calls, maybe there's -- just as an  
7 investigative tool the providers will send out a specialized  
8 vehicle with a lot of specialized equipment: Many handsets  
9 running phone calls, hanging them up, calling again, hanging  
10 them up. Other handsets doing data transactions with the  
11 network, so just kind of doing data testing. There's also  
12 typically a just a receiver that's not making phone calls, just  
13 monitoring channels. And using this equipment, we will drive  
14 and record with a bunch of handsets at once and kind of see how  
15 the network is behaving in areas of interest.

16 Q. So with respect to the cell site used to initiate a call or  
17 a text -- not ones that are handed off during a call, but to  
18 initiate a call -- what, if anything, have you observed about  
19 the relationship between connectivity and the distance from the  
20 device to the site?

21 A. Well, in my experience it's always one of the first tier of  
22 neighbors of cell towers that you are within. It would be very  
23 rare to always be underneath of a tower when you're initiating  
24 a call. We don't have that many towers out there. But even in  
25 a dense area, you're going to have some distance from the

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1 tower. So it's typically the case that you're kind of  
2 surrounded by towers, maybe two, three, four towers that  
3 potentially could serve you depending on your distance and  
4 relationship to them.

5 THE COURT: I'm sorry, go on.

6 A. But in my experience, it's always one of those towers  
7 that's surrounding you with the sector of antennas pointed  
8 generally in your direction that you're going to initiate your  
9 call on.

10 THE COURT: You examined, did you, the cell tower or,  
11 excuse me, the evidence relating to cell tower and phone  
12 location that the government's proposing to introduce in this  
13 case?

14 THE WITNESS: I have.

15 THE COURT: And you made a determination, did you,  
16 that the cell phone had to be within, what, a certain amount of  
17 feet of the cell tower?

18 THE WITNESS: Well, based on this specific environment  
19 and my examination of the sites and the surrounding areas, and,  
20 most importantly, the distance between sites -- in the case of,  
21 let's say, T-Mobile in this case where there is a facility  
22 roughly every five, six blocks or so, it's very likely that  
23 when a device connects to one of those towers, that they're  
24 going to be within three blocks, half the distance.

25 THE COURT: To make that determination, you base that

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1 really on your understanding of how the cell phone connections  
2 work as a physical matter, your experience with cell phone  
3 locations similar to this one, and your observations of the  
4 actual data?

5 THE WITNESS: Correct.

6 THE COURT: So someone who did not have those  
7 qualifications would not be able to give the opinion you just  
8 gave, true?

9 THE WITNESS: I don't know -- I guess we'd have to  
10 examine their qualifications or their experience.

11 THE COURT: Well, if someone said, "I'm an  
12 investigator for the U.S. Attorney's Office" -- at that point  
13 there's a little drum roll, but after we get past that -- "and  
14 I'm not an engineer, and I don't have a technical understanding  
15 of exactly how these things work, although I have a more  
16 general understanding based solely on what I've read, but I  
17 could see what the data is," would that person be able to say  
18 in a reliable way, "So it's my opinion that the phones had to  
19 be within a few blocks" or would we need someone like you to be  
20 able to really give an opinion like that?

21 THE WITNESS: I think someone that you've described  
22 could give that opinion, and, you know, the Court can give it  
23 the weight that they see fit. But it's a generally accepted  
24 principle as to how these networks work and how they balance  
25 traffic typically. And anyone that gives that opinion is going

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1 to also point out some of the caveats in that with traffic  
2 shedding and obstructions, and so it's not always the closest  
3 site, I don't think --

4 THE COURT: I understand that, but when you say it's a  
5 generally accepted principle, have any experiments been done to  
6 try to, if you will, fool a tower or see if it will not  
7 necessarily connect with the strongest signal but maybe with  
8 just the physically closest? I can, you know, speculate, but  
9 are there -- has any of this been the subject of testing?

10 THE WITNESS: Well, I don't know of any experiments to  
11 push -- let's say, try to push a device on to a more distant  
12 tower, but I can just speak from my own experience with the  
13 hundreds of drive tests I've done over the years, that I've  
14 never seen a call initiate on a tower outside of that first  
15 tier of sites. It's not always the closest site, but I've  
16 never seen it outside of kind of that first tier of neighbors  
17 of sites.

18 THE COURT: What about is it possible for the tower's  
19 recording mechanism to get it wrong?

20 THE WITNESS: Not that I've ever seen, and I've  
21 studied hundreds of call detail records, and I've never seen  
22 anything in a call detail record that looked so strange that it  
23 popped out at me and just looked impossible. I've never seen  
24 that. It's important to note that these are created and stored  
25 in an automated fashion so the human error aspect isn't present

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1 in this case.

2 THE COURT: You're saying that because really there's  
3 no human being involved in this process other than pushing a  
4 phone to start the call, the chance of there being the kind of  
5 error that you might find where there is human intervention is  
6 much more remote?

7 THE WITNESS: Yes, it's basically eliminated in this  
8 case because of the way that these records are created and  
9 stored.

10 THE COURT: Okay. Counsel.

11 MR. BALSAMELLO: Thank you, your Honor.

12 BY MR. BALSAMELLO:

13 Q. You referenced a few times you've never seen a cell phone  
14 connect to something outside of a first tier. I think you said  
15 that's the nearest two or three or four depending on the  
16 density around the phone. Is that right?

17 A. That's right.

18 Q. So even understanding that a phone may connect to  
19 something, not the closest, but something else in that first  
20 tier, do you have an opinion about whether a -- what is your  
21 view, if you have any, as to whether a reliable opinion can be  
22 formed about the location of the device even if the phone is  
23 not connecting necessarily to the closest?

24 A. We can still form a general -- an opinion as to a general  
25 location of that device even if it's not connected to the

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1 closest because the second closest, and particularly if it's a  
2 sectorized site, the second closest sector is still going to  
3 point in the same general direction as the closest sector just  
4 by the nature of how these facilities are arranged.

5 So, again, we can't pick and choose which building or  
6 the exact address that the call was initiated or received at,  
7 but we can still form that general opinion of a location.

8 Q. Picking up on a topic the Court just asked about regarding  
9 CDRs or how the records are kept, have you ever seen call  
10 detail records where there's information omitted; for example,  
11 entries that didn't capture location data?

12 A. I have, yes.

13 Q. Do you have any understanding as to why that sometimes  
14 occurs?

15 A. No, other than some of the databases may be incomplete that  
16 feed the CDR. So, a good example I have seen is where some of  
17 the call detail records will give specific information about,  
18 let's say, the beam width of the antennas in the sector that's  
19 served. So that's kind of the 3D beam width is where the  
20 majority of the power that of sector is, and that is specified  
21 sometimes. Sometimes it's omitted. I suspect it's just from  
22 the database that the CDR is pulling that, that that entry is  
23 blank or incomplete. So I have seen instances like that, yes.

24 Q. Does any incompleteness or do any omissions from CDRs cause  
25 you to have any doubt as to the accuracy of the data that



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1 appears in the CDR?

2 A. They don't, no.

3 Q. Why not?

4 A. Well, just because there may be certain data that's not  
5 captured for whatever reason, in my opinion has no bearing on  
6 the data that is captured, again, because the data that is  
7 captured that I've reviewed over the last decade or more now  
8 looking at these CDRs has never appeared to me to be obviously  
9 questionable or false or unexplainable.

10 Q. With respect to how the networks are designed again and how  
11 the sites are laid out, how, if at all, does the network layout  
12 or design in an urban area like the West Farms neighborhood in  
13 the Bronx differ from the island in the field, the sole cell  
14 site sitting in a remote location? How do they differ?

15 A. Well, in the West Farm area or any urban, dense urban area,  
16 we're going to have significant cell density to support the  
17 user and the use cases that are so prevalent now as far as  
18 folks streaming video, sending text, doing work-type of email  
19 attaching on their devices now on-the-go.

20 So, in order to support that, the carriers need high  
21 cell density, and in the case of T-Mobile, in this area a site  
22 every five, six blocks or so is what we saw and that was in the  
23 time frame 2016 into 2017. So that density has probably  
24 increased pretty significantly by now.

25 Whereas the island scenario where we have a site out

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1 in the middle of a field, it's not that farfetched a scenario,  
2 but we do have some sites, let's say, up along a remote highway  
3 where we're only concerned about covering that highway, and the  
4 next site to the east, let's say, on an east-west highway may  
5 be three, four miles away, and the next site the other way may  
6 be another three, four miles away. So that site could be  
7 covering, let's say, a three, four mile radius around it. But  
8 there's always going to be that next connecting site. Very  
9 rare to have true island sites now.

10 So because there's always that next connecting site,  
11 there's always going to be that upper limit, that kind of rough  
12 upper limit as to just how far we would expect a user to be  
13 before they hand off or initiate on the next site in any  
14 direction.

15 Q. Is there anything about how sites are calibrated or  
16 physically positioned that contributes to what you just  
17 described as sort of the distance at which they would then hand  
18 off?

19 A. It's generally the practice that the sites are set up with  
20 the same power settings. Now, there are some notable  
21 exceptions when we try to shift traffic, let's say, in the case  
22 of a busy ballpark where we want to use some of the neighboring  
23 sites to get into a sporting venue to help out just by way of  
24 example. But, generally speaking, we have a homogenous area  
25 where we want all those sites to be of the same strength, if

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1 you will. That way there's a load balancing. Each site is  
2 doing its fair share of heavy lifting, and the network benefits  
3 as a whole because of that because now we have the most  
4 efficiency we can out of the network. We don't have site A  
5 doing 90 percent of the traffic in the geographical area that's  
6 covered by site A and B. That just wouldn't be a good use of  
7 resources. So, because of that, we know that that handoff  
8 area, the gray area where we're going from site A to site B is  
9 typically equidistant.

10 THE COURT: I take it from your observation, at least  
11 as far as you know, there are no farms left in the West Farms  
12 area of the Bronx?

13 THE WITNESS: None that I saw. The only kind of  
14 non-homogenous area, the park to the north with the zoo, and  
15 there is a lack of sites in that area, as you'd expect. So, in  
16 that area there are some -- and there's also the creek there,  
17 the creek bed there, so a bit of a depression in the terrain.  
18 So that was notable.

19 But other than that, it's a pretty homogenous area:  
20 Highways bisecting it in different directions and some moderate  
21 structures -- moderately tall structures, up to ten-story  
22 structures or so.

23 Q. Is there anything about how cell sites are angled when  
24 they're put up that affects their coverage areas?

25 A. Yeah, we do -- in an area like this where we have

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1 predominantly rooftop sites, as engineers -- and I've done this  
2 personally dozens, if not a hundred times -- gone out onto  
3 rooftops, physically picked the locations where I want to put  
4 the antenna array. Generally, it's pushed to the edge of the  
5 rooftop inside the parapet and then elevated on what we call a  
6 sled mount, it looks like a football sled, and then it's  
7 ballasted to the roof so as not to penetrate the roof. That  
8 way we can ensure with the best line of site to the area that  
9 we are looking to cover. Sometimes landlords don't like that.  
10 They may want you back on the penthouse. They may want you to  
11 do some other type of mount. But it's always done with the  
12 design goals in mind, and we can point these directional  
13 antennas into certain areas that we -- let's say we want to  
14 cover along a busy highway, we'll put a sector that points  
15 right along that busy highway. Then on the other side of the  
16 building, we'll put another sector that points along that busy  
17 highway. And in that fashion we really design the specifics of  
18 where the energy from the site is focused.

19 Q. Are they often tilted down to cover a specific area?

20 A. They are. And in a case like this, the more dense the  
21 area, generally speaking, the greater the tilt. And that's  
22 done with mechanical tilt as well as electrical tilt.

23 Electrical tilt is just a shift in the pattern where the  
24 antenna pattern is actually focused more off of the horizon.  
25 And then mechanical tilt will physically look down till the

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1 brackets tilt the antennas down off the sled. And in an area  
2 like this, I'd expect a combination of those two to be  
3 somewhere in the range of ten degrees, eight to ten degrees on  
4 these sites, maybe even more.

5 Q. Shifting slightly to a more specific topic to this case,  
6 you said earlier you looked at Sprint and T-Mobile records for  
7 late 2016 and 2017?

8 A. That's right.

9 Q. And did you look specifically -- first of all, the  
10 testimony you've given so far about sort of homogenous terrain  
11 and location placement, was that applicable to both T-Mobile  
12 and Sprint?

13 A. Yes.

14 Q. Did you look at whether the cell sites listed on the  
15 providers' tower lists were in fact located in the places where  
16 the records said they were?

17 A. I did. I verified that through the use of Google Earth and  
18 Google Earth Pro, I verified that roughly at the time of the  
19 CDR record that there was indeed a cellular facility at the  
20 location that the CDR says there was.

21 Q. And you didn't do that for the whole Bronx and Manhattan,  
22 right?

23 A. No, just for the sets of locations that I was given.

24 Q. And those locations, was there a map of West Farms that the  
25 government provided?

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Petersohn - Cross

1 A. Yes.

2 Q. And then separately, were there CDR entries for specific  
3 cell site hits that you looked at those locations?

4 A. Yes, there were.

5 Q. And for each of them, did you find a cell site at the place  
6 anticipated?

7 A. Yes, I did.

8 Q. How, if at all, did --

9 THE COURT: I'm sorry, counsel. I'm going to  
10 interrupt you, although I'm sure you have other relevant  
11 questions to put, but I think at this point, it would be useful  
12 to hear cross-examination, and then we'll come back to you to  
13 cover anything you haven't yet covered or anything else you  
14 want to say.

15 MR. BALSAMELLO: Yes, your Honor.

16 CROSS-EXAMINATION

17 MS. HARRIS: Your Honor, we actually have some hard  
18 copies of the exhibits that we sent over to chambers earlier.

19 THE COURT: Okay. I have what you sent to chambers.

20 MS. HARRIS: There is one extra that wasn't in the  
21 email and then there's one piece that may be used on  
22 cross-examination.

23 THE COURT: Okay.

24 BY MS. HARRIS:

25 Q. Good afternoon.

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Petersohn - Cross

1 A. Good afternoon.

2 Q. I'd like to start with just a few basics. I think the  
3 Court and the prosecutor covered much of it, but I just want to  
4 establish a few things upfront.

5 Now, cell site technology that you've been discussing  
6 was not actually designed to locate a cell phone user, correct?

7 A. Correct.

8 Q. That wasn't its purpose?

9 A. That's correct.

10 Q. And, in fact, you're not trained specifically to conduct  
11 historical cell site location analysis. Is that right?

12 A. I have had some training from AT&T on it.

13 Q. But CDRs that you've been discussing -- and I think you  
14 said this on direct -- they're essentially billing records,  
15 correct?

16 A. That's correct. They are used occasionally for some  
17 performance-type of analysis but mainly for billing.

18 Q. And so the information that's pulled into it automatically  
19 has information which the cell phone companies believe is  
20 necessary for billing purposes, correct?

21 A. Correct.

22 Q. And you talked briefly about missing information in the  
23 CDRs. The missing information if you're looking at a  
24 particular entry that lacks, for example, the base station  
25 identifier, that makes it difficult to map or try to place on a

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Petersohn - Cross

1 map the cell phone user, correct?

2 A. A base station identifier wouldn't really have a bearing on  
3 the location. It would be -- if the latitude or longitude were  
4 missing, that would be a problem.

5 Q. And certainly if both were missing, that would be a  
6 problem, correct?

7 A. Certainly.

8 Q. So if you were trying to get --

9 THE COURT: I'm sorry. I'm a little unclear about  
10 what kind of missing information we're talking about.

11 THE WITNESS: So I have seen -- as I testified to  
12 earlier, I have seen some specific information of a call detail  
13 record missing; never a latitude or longitude or a base station  
14 identifier, but I have seen some of the data that may be more  
15 in the minutiae. The example I gave before was an antenna beam  
16 width, I have seen those missing in the past where, not the  
17 direction of the antenna, but the beam width. So whether it  
18 was, let's say, a 90-degree beam or 65-degree beam, that just  
19 tells us as engineers where the majority of the energy is  
20 directed or how fat, I should say, the way you can twist a  
21 Maglite and change that beam width, that's kind of an analogous  
22 piece of information there just how wide that beam width is,  
23 not the direction of it.

24 THE COURT: Let me just ask counsel the same question.  
25 What missing information are you referring to?



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Petersohn - Cross

1 MS. HARRIS: Your Honor, I am referring to latitude  
2 and longitude missing information, and attached as an exhibit,  
3 actually withdrawn, but one of the proposed exhibits, your  
4 Honor, shows an example from the spreadsheets in this case that  
5 are in fact --

6 THE COURT: All right. I'll hold off until you get to  
7 that.

8 MS. HARRIS: Correct, and I think it will be more  
9 relevant to the second witness that the government intends to  
10 call.

11 THE COURT: All right.

12 BY MS. HARRIS:

13 Q. But, in any event, this information we're talking about is  
14 very different than, for example, GPS data, correct?

15 A. Correct.

16 Q. Gaps data, in fact, is designed to locate a cell phone  
17 user, correct?

18 A. Yes, or a user of any GPS device. It doesn't have to be a  
19 cell phone, but, yes, GPS is used for positioning.

20 Q. Fair. So you talked a little bit about how cellular  
21 networks are designed to optimize connectivity for phones,  
22 correct?

23 A. Correct.

24 Q. And as we've discussed, they're designed to ensure that the  
25 cell phone user connects to the strongest or best quality

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1 signal, correct?

2 A. That's right.

3 Q. And a cell phone actually constantly ranks towers from best  
4 to worst, correct?

5 A. Within -- it doesn't rank the entire network of towers, but  
6 the towers that it's monitoring would be kind of that first  
7 group of towers around it. Yes, it does rank them.

8 Q. And it ranks them based on the strength of signal, correct?

9 A. Strength and quality. So not just for strength but also  
10 signal to noise ratio.

11 Q. There are often several towers that would be on this list  
12 that the cell phone is ranking, correct?

13 A. Correct.

14 Q. Could be as many as six towers, correct?

15 A. Could be, yeah. Neighbor lists. It depends on kind of  
16 what mode the phone is in as to what it's monitoring, but,  
17 yeah, neighbor lists can certainly have that many towers on it.

18 Q. So, at any given time, there are in fact multiple towers  
19 that a cell phone could connect to, correct?

20 A. Well, when it's on a phone call, it's looking to see where  
21 it should hand off next. So when we say towers to, it's  
22 important that we note that it's actually monitoring sectors.  
23 And typically each tower has three sectors. So the neighbor  
24 list is automatically going to be populated with the other two  
25 sectors of the site that you're on because sometimes you're

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1 kind of driving around a site, although kind of not in a circle  
2 but still kind of driving past it, you'll hand off. So there  
3 you have two sectors. And then let's just say that there's  
4 four other sites, each having a sector pointing kind of towards  
5 you where, you know, we're up to six sectors already of  
6 neighbors, so that's not abnormal, no.

7 Q. But to be clear, a cell phone doesn't rank cell sites or  
8 sectors based on proximity, correct?

9 A. Correct.

10 Q. And that means that the first ranked tower is not  
11 necessarily the closest tower?

12 A. Not necessarily, that's correct.

13 Q. And so on; the second ranked tower is not necessarily the  
14 second closest tower, correct?

15 A. Correct.

16 Q. And you've talked a lot about first tier of sites, and I  
17 think it's your opinion that in the majority of cases, a cell  
18 phone is going to connect with a site within the first tier of  
19 sites, correct?

20 A. That's correct.

21 Q. And that first tier of sites includes multiple sites,  
22 correct?

23 A. Yes. It depends on the circumstances, but it can include a  
24 handful of sites.

25 Q. Even up to six sites, correct?

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1 A. That would be an extreme case to have six sites kind of in  
2 a first tier, particularly in a more dense area. I would say  
3 it's more likely to be three, four.

4 Q. Okay. I'd like to come back to the question of sites in a  
5 minute.

6 You talked a little bit about density of cell sites in  
7 urban areas, correct?

8 A. Yes.

9 Q. And one of the reasons it sounds like we need lots of sites  
10 in a dense urban area is because load is a real issue, correct?

11 A. Correct.

12 Q. Lots of people, right?

13 A. Yes.

14 Q. Using their cell phone constantly, right?

15 A. Yes.

16 Q. And so the notion that one site might be overloaded and the  
17 cell phone would connect with option B on the ranking list is  
18 fairly common, correct?

19 A. It's common. More common during certain times of the day,  
20 let's say, during the afternoon rush, etc.

21 Q. And, again, that option B is based on the strength and  
22 quality of the signal, not on proximity, correct?

23 A. Correct.

24 Q. Now, specifically in West Farms, you say you looked at the  
25 map and you estimated that the cell sites are about five to six

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Petersohn - Cross

1 blocks apart, correct?

2 A. For T-Mobile specifically.

3 Q. T-Mobile.

4 A. Yes.

5 Q. And so when we're talking about four sites being in the  
6 first tier of sites, that could encompass easily a 20-block or  
7 even more, a 24-block radius, correct?

8 A. No. No. When I say the first tier, I mean the tier that  
9 surrounds you. So, imagine if you're a mobile device sitting  
10 in the middle of a circle of people in chairs, and the people  
11 in chairs are towers, you know they're sitting in a circle  
12 around you, you're going to be -- and those chairs are five  
13 blocks apart from one another, six blocks apart from one  
14 another, you're going to be about three blocks away from chair  
15 one, three blocks from chair two. You're in the middle of that  
16 circle. Those are the sites that are going to serve you, and  
17 particularly the sector of sites that point into the circle.

18 Q. Let me follow up on that a little bit because that assumes  
19 sort of a perfectly grid sort of layout of cell sites.

20 A. No.

21 Q. Because that's what you just described.

22 A. Doesn't have to be a perfect grid. Even if you imagine  
23 sites that are kind of even haphazardly placed but in that  
24 general five to six block distance from one another, no matter  
25 where you place yourself in that setup of sites that's not on a

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Petersohn - Cross

1 perfect grid, you're going to be surrounded by, in the case  
2 here that we're talking about, three or four sites that you can  
3 say, yeah, those are the three or four that are closest, and  
4 likely to be serving someone in this center of this circle.

5 Q. Again, at the beginning of the Court's examination, there  
6 was a big discussion about obstacles, correct?

7 A. Correct.

8 Q. So, again, the circle that you just described assumes all  
9 of those cell sites have no obstacles and the signal strength  
10 is clear, correct?

11 A. No. So my testimony was that the signal from those sites  
12 are all going to be affected somewhat equally by the obstacles.  
13 Now you may have more obstacles from site number one over here  
14 than there are from site number two. And so site number two  
15 that may be a little further away from you may actually serve  
16 you, but it's still within that first tier of sites that you're  
17 surrounded by, so there's no assumption of perfect.

18 Q. If we can back up a second --

19 A. Sure.

20 Q. -- because when we talked about the ranking of sites,  
21 again, the ranking of sites are not based on location, correct?

22 A. Correct.

23 Q. They're based on signal strength, correct?

24 A. That's right.

25 Q. So when we're talking about what is in the surrounding --

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Petersohn - Cross

1 which cell sites your phone is going to connect with, we're  
2 talking about cell sites with the strongest signal, correct?

3 A. Correct.

4 Q. And on any given day, we don't know when you're standing in  
5 the middle of West Farms which those might be, correct?

6 A. That's correct.

7 Q. Because of all the different factors that could affect  
8 signal strength, correct?

9 A. That's right.

10 Q. Could be weather, correct?

11 A. Weather doesn't play as much of a role as folks think.  
12 It's more environmental, manmade clutter, leaves. Certainly  
13 time of year can change things because foliage will have an  
14 attenuating effect. But weather -- unless we're talking about  
15 very high frequencies, weather isn't really much of a factor.

16 THE COURT: I'm sorry, counsel, would you and  
17 government counsel come to the sidebar, please.

18 (At the bar sidebar)

19 THE COURT: I'm not quite understanding how this line  
20 of cross-examination is directed to Daubert and the reliability  
21 of the science involved. It is, of course, fair game at trial  
22 if a witness like this were testifying to say, now, you don't  
23 know for sure whether this guy was standing at corner X or  
24 corner Y, and there would be a debate as to how far away it  
25 might be, but that doesn't go to the admissibility of this

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1 evidence because it doesn't -- it's not related -- both sides  
2 assume the same basic physical principles are operating.  
3 They're just not in agreement as to how in this particular case  
4 those physical -- what you could reasonably infer from the  
5 notations about location.

6 So let me make sure though I understand the  
7 government's position, which is, as I understand it, that  
8 you're not saying that the evidence you're going to introduce  
9 through cell tower evidence will pinpoint in the way that a GPS  
10 could the specific location, but only that it had to be or a  
11 reasonable juror could conclude that it was very likely to be  
12 in area X. Do I have that right?

13 MR. BALSAMELLO: That's correct.

14 THE COURT: I'm sorry?

15 MR. BALSAMELLO: Yes, that's correct.

16 THE COURT: And what is the area that you say a  
17 reasonable juror could infer? An area of six feet from the  
18 tower that records it, ten feet, or are you putting any number  
19 on this?

20 MR. BALSAMELLO: No, your Honor. And it will in fact  
21 be dependent a bit on each map that we're looking at. Our  
22 witness would be Agent Donaldson from U.S. Attorney's Office,  
23 and he will have --

24 THE COURT: I must say, forgive me, I have the  
25 greatest, greatest respect for Mr. Donaldson, but I must say



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1 this witness who is on the stand now seems to me much more in a  
2 position to talk about the science of this than Mr. Donaldson  
3 is. And I'm wondering whether that doesn't mean that he is the  
4 witness, if any, that you will be able to call, but we can  
5 reach that question another day.

6 So let me go back to defense counsel. So the  
7 government is in effect agreeing with you that this technique  
8 does not allow one to pinpoint a specific location but only to  
9 get a general idea of the location of the cell phone. And you  
10 can cross-examine him, the witness, whoever the witness may be,  
11 as to how broad or narrow that scope may be.

12 But I don't think that goes to the reliability of the  
13 science, is my point. The reliability of science would be in  
14 play if you were contending either that the technique being  
15 used when it says three feet or within three to six feet  
16 typically gets it wrong or, you know, just plain gets it wrong  
17 because of methodological flaws, or he might be saying that  
18 even though the science is fine, the interpretation that a  
19 given witness is giving based on his experience that it needs  
20 only within six feet as opposed to five miles, is just not a  
21 fair inference, and that's all fine, but that's all for  
22 cross-examination. What I am trying to --

23 MS. HARRIS: I understand.

24 THE COURT: Okay, go ahead.

25 MS. HARRIS: Your Honor, two things.

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1 THE COURT: Please.

2 MS. HARRIS: One is, I can move on to questions that  
3 do address methodological issues and concerns that we have, so  
4 we can do that momentarily, and that's where I'm headed. But I  
5 don't think we're in as much agreement as your Honor suggests  
6 because the maps, which you'll see more clearly with the  
7 Mr. Donaldson, Agent Donaldson, when he testifies --

8 THE COURT: One of the reasons I called this sidebar  
9 is I'm not sure what it is that Mr. Donaldson is going to be  
10 saying that's different from what this witness is saying. And  
11 this witness, to be frank, again, is much better credentialed  
12 to give these kind of opinions than Mr. Donaldson is. So let's  
13 assume for the sake --

14 MS. HARRIS: Sure, whoever it is, your Honor.

15 THE COURT: Let's assume it's only this witness.

16 MS. HARRIS: I think the relevance of the distance and  
17 what it means to say a cell phone connects within the first  
18 tier, what does that mean in terms of distance is relevant to  
19 our second objection, which is Rule 403, your Honor, and it  
20 will go to limiting -- to the extent the evidence comes in,  
21 objections to limiting exactly what they're going to be able to  
22 say and present through whichever witness about that evidence.

23 So, they are trying to suggest that the cell site  
24 evidence will place our client and other co-conspirators on a  
25 specific block, your Honor.

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1 THE COURT: As I understand it, they are trying -- I  
2 think they just disclaimed saying that this evidence will show  
3 that he's on a specific block. I think what they're saying is  
4 we have other evidence that places him on a specific block, but  
5 this evidence corroborates that inference because it shows he's  
6 in the general area. And you may cross-examine and say, well,  
7 doesn't it really show he's in a much broader area than this.

8 MS. HARRIS: Understood.

9 THE COURT: But I don't think that it -- again, that  
10 doesn't go to the Daubert issues.

11 MS. HARRIS: Understood.

12 THE COURT: So maybe we should turn to --

13 MS. HARRIS: That's fine. We'll move on.

14 But, your Honor, with respect to our Rule 403  
15 objection, I do want to make clear that this is the area where  
16 my -- right on around the corner from any of the locations that  
17 are relevant in this case, my client's mother lives where he  
18 lived for many years. There are lots of innocent reasons --

19 THE COURT: That's great cross-examination, and I look  
20 forward to that cross-examination, and independent evidence,  
21 you know, he was visiting his mother. If he was in the area at  
22 all, he was visiting his mother, but that's not what we're  
23 concerned with this afternoon.

24 MS. HARRIS: It dovetails to the Rule 403 whether the  
25 probative value is de minimus --

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1 THE COURT: I'm much more concerned this afternoon  
2 with the methodology.

3 MS. HARRIS: Understood. We'll move on. Thank you.

4 (In open court)

5 BY MS. HARRIS:

6 Q. I think before we broke we were talking about your opinion  
7 that in the vast majority of cases a cell phone will connect  
8 with a cell site in the first tier of cell sites. Is that  
9 correct?

10 A. Correct.

11 Q. And I want to talk about the basis for that opinion, all  
12 right. As I understand it, the basis for that opinion is your  
13 personal experience conducting drive tests, correct?

14 A. That's part of the basis, yes. The other part being just  
15 my understanding of how these networks operate and how they're  
16 configured and what the intention of the design, the standard  
17 design for these networks is.

18 Q. Right. So I'll just take the first part of that. For a  
19 moment, it's -- the first part of what you said is that it's  
20 based on the way the system is supposed to work, correct?

21 A. Correct.

22 Q. And what we're trying to figure out here is how often it  
23 actually works that way, correct?

24 A. Correct.

25 Q. And for that portion of the analysis, your opinion is based

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Petersohn - Cross

1 on the actual drive tests that you've done in the field to see  
2 how often cell phones actually connect to cell sites in the  
3 first tier of adjacent cell sites, correct?

4 A. Correct.

5 Q. So you've conducted hundreds of drive tests since the late  
6 1990s, correct?

7 A. Yes.

8 Q. So over a 25-year period, roughly?

9 A. Yes.

10 Q. And you don't maintain a log or a record of these drive  
11 tests, correct?

12 A. I don't have specifics of each and every one, and to --  
13 just to give the Court a better idea, for awhile when I was an  
14 intern at a co-op at what is now Verizon Wireless, that's all I  
15 did was drive testing day in and day out because, of course,  
16 what else do you have a co-op do? So for a semester or so I  
17 was driving almost every day and analyzing every other day the  
18 data that we would collect. So just in that kind of time  
19 period there were probably hundreds of drives done.

20 Q. Understood. And I think when you talked about your  
21 background, the most of the work you do is in the service of a  
22 telecommunication company, correct?

23 A. Yes.

24 Q. And many of these drive tests then, perhaps all of them,  
25 were related to some business need of the telecommunication

L7DQscaO

Petersohn - Cross

1 company, correct?

2 A. The majority, yes. Yeah.

3 Q. Or a litigation need sometimes, right?

4 A. Yes, correct.

5 Q. And the goal of most of these tests, these drive tests, is  
6 to determine gaps in service area, correct?

7 A. Sometimes. Sometimes it's just baseline driving where we  
8 just drive every road of a given area, not necessarily looking  
9 for, you know, anything; just making sure that things are  
10 working the way they're supposed to work, not because there  
11 have been reports of issues or anything like that, just kind of  
12 baselining an area.

13 Q. Doing a check-in basically with the network?

14 A. Yeah.

15 Q. Making sure there aren't dropped calls?

16 A. Correct.

17 Q. Or failures to connect?

18 A. Correct.

19 Q. And, in fact, I think you told the government about a  
20 recent one that you conducted, correct?

21 A. Yes.

22 Q. And you said that -- you weren't really focused on what  
23 tower the cell phones were connecting to because that wasn't  
24 the purpose of the drive test, right?

25 A. Right. That was for a case that was in zoning in Newlin

L7DQscaO

Petersohn - Cross

1 Township, Pennsylvania where the carrier was asserting a gap in  
2 coverage, and there were some residents who felt the opposite;  
3 that there was no gap in coverage; that there was no need for a  
4 new site. So there was a drive test done in order to examine  
5 that by the -- and that drive testing in that case was done by  
6 the residents. They did some drive testing. In that case, the  
7 carrier didn't.

8 Q. Understood. But fair to say that the vast majority of  
9 drive tests are just focused on the question of whether a cell  
10 phone connects to a cell site, correct?

11 A. In a case -- in a case like that, if it's a -- yeah, if  
12 it's a case where we're trying to prove need or where some  
13 opposition is trying to prove the lack of need, then yes,  
14 they're not that concerned as to what tower it's connecting to,  
15 just monitoring, let's say, dropped call statistics. But the  
16 majority of drives that I've looked at over the years were more  
17 of the ilk that we were discussing earlier where we are looking  
18 at where we're connecting to.

19 Q. Right. You're looking at whether you're connecting and the  
20 strength of a signal, correct?

21 A. No, the majority would be more of what site are we  
22 connecting, did we drop a call, what site did we drop off of,  
23 where is the handoff taking place. That's the majority of the  
24 drive testing that's done directly on behalf of the carriers  
25 where they're monitoring their systems.

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Petersohn - Cross

1 Q. Let's back up a little bit. When they're monitoring their  
2 systems, you're concerned about dropped calls, correct?

3 A. We're concerned about all performance aspects, and that  
4 would include, you know, what site is covering where; when do  
5 they hand off to the next site; is it happening at the spot  
6 that we thought it would or close to the spot that we thought  
7 it would; are you dragging a site further than you should into  
8 the next site's kind of coverage area. So it's very much  
9 focused on what site is covering where.

10 Q. Now, in any event, because you don't have any records for  
11 your actual drive tests, you can't actually say exactly how  
12 many you've done, correct?

13 A. I couldn't tell you exactly how many, no.

14 Q. And you don't have any data showing the results of those  
15 drive tests, correct?

16 A. No, not with me.

17 Q. And you can't probably sit here from memory and tell us all  
18 the different locations that you've actually done drive tests  
19 for, correct?

20 A. No, they're mostly in the Philadelphia market and  
21 surrounding areas.

22 Q. Most of your work is in Pennsylvania, fair?

23 A. Pennsylvania, New Jersey, kind of surrounding Philadelphia.

24 Q. And you've never done a drive test in the West Farms  
25 neighborhood of the Bronx?



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Petersohn - Cross

1 A. No.

2 Q. Have you ever done one in the Bronx at all?

3 A. No.

4 Q. How about New York City?

5 A. Not -- no, I don't think so.

6 Q. And as we discussed earlier, there are unusual load issues  
7 in high-density areas like New York City, correct?

8 A. Yeah, they wouldn't be any different or more unusual than,  
9 let's say, downtown Philadelphia.

10 Q. But you don't have records of the number of drive tests  
11 that you've done in downtown Philadelphia, correct?

12 A. Correct.

13 Q. Can you tell us how many drive tests you've actually done  
14 in downtown Philadelphia?

15 A. I could tell you that it was -- it's probably hundreds if  
16 we, you know, looked at over the years, but I couldn't give you  
17 an exact number, no.

18 Q. So you don't have any recorded data, like records or  
19 documents, that demonstrate the number of times that a cell  
20 phone user connected to the closest tower, correct?

21 A. I don't.

22 Q. And you don't have records or data that show the number of  
23 times that a cell phone user connected to the second closest  
24 tower, correct?

25 A. I do not.

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Petersohn - Cross

1 Q. Or the third or the fourth?

2 A. No.

3 Q. So your testimony that is about your opinion about what  
4 happens in the vast majority of times is based on your memory  
5 from your personal experience, correct?

6 A. Correct.

7 THE COURT: Maybe I'm missing something. Is it based  
8 just on that or is it based on how the signals rapidly diminish  
9 over distance?

10 THE WITNESS: Well, it is based on -- but I think  
11 counsel's question was more towards what I'm basing what I've  
12 seen in the field on. I know that -- I made the distinction  
13 earlier, I think, that my opinion is based on my personal  
14 experience as well as how I know these facilities and these  
15 networks are designed and the underlying fundamentals, the  
16 physics of it.

17 THE COURT: Maybe I misunderstood earlier. I thought  
18 you said that a signal of the sort emitted by a cell phone or  
19 tower diminishes in strength very rapidly over a distance.

20 THE WITNESS: It does.

21 THE COURT: I think you said, I forget the formula,  
22 but it's a square --

23 THE WITNESS: Right, with the square of the distance,  
24 the signal strength is inversely proportional to the square of  
25 that distance.

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Petersohn - Cross

1 THE COURT: So, of course, if the signal were strong  
2 enough, even if diminished rapidly, it still might connect  
3 because it began at a very strong level?

4 THE WITNESS: Yes.

5 THE COURT: But assuming it were, for lack of a better  
6 word, the same strength for all the towers, then the physics of  
7 that would be that it would be much more likely to connect to  
8 nearby towers than distant towers. Isn't that right?

9 THE WITNESS: Absolutely correct, yes.

10 THE COURT: All right.

11 BY MS. HARRIS:

12 Q. Just to follow up on what the Court just asked you. The  
13 physics would dictate how that worked if we're in the open  
14 field situation, correct?

15 A. Certainly in an open field situation, but it also applies  
16 in an area with manmade and environmental clutter because that  
17 clutter will affect the signal from all the towers, maybe not  
18 exactly evenly because of how the line of sites will change as  
19 you move through an environment, but it will certainly have an  
20 overall effect that would be -- without being exactly equal  
21 would be substantial for all facilities in an area.

22 Q. But in terms of the effect of the clutter on -- withdrawn.

23 Going back to the drive test results, which are your  
24 empirical experience about how often in fact cell phones  
25 connect to cell sites in the first tier of sites, because you

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Petersohn - Cross

1 have no actual data or recorded data about this, it means this  
2 Court has no way to evaluate your methodology. Is that fair?

3 A. Well, the methodology is industry standard methodology of  
4 using data collection software and data collection equipment,  
5 so it's not necessarily my methodology, but the Court would  
6 have to rely on my memory of, you know, past experience.

7 Q. But at least one -- courts in the past have had the  
8 opportunity to evaluate your methodology. Isn't that right?

9 A. I didn't understand the question.

10 Q. You've testified, as you told the government, on several  
11 occasions prior to this one, correct?

12 A. Correct.

13 Q. You've been certified as an expert in numerous cases,  
14 correct?

15 A. Correct.

16 Q. Most of them civil cases?

17 A. Yes.

18 Q. And you testified -- in fact, you gave a list of the cases  
19 in which you had previously testified that you could remember  
20 to the government in advance of this hearing, correct?

21 A. Correct.

22 Q. And one of those cases was a bench trial in Pennsylvania in  
23 2009, correct?

24 A. Correct, if it was Seiberlingville, Weisenberg Township.

25 Q. Weisenberg?

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Petersohn - Cross

1 A. Yes, correct.

2 Q. And you were retained as an expert on behalf of AT&T  
3 Mobility. Is that right?

4 A. Correct, yes.

5 Q. And in that case, AT&T was claiming there was a gap in  
6 coverage which allowed or required them to build a new tower in  
7 the middle of a farm field, correct?

8 A. Correct.

9 Q. And the town was opposing in that case, correct?

10 A. That's right.

11 Q. And you conducted drive test analysis in connection with  
12 that litigation, correct?

13 A. I do believe so. It's been awhile, but I do believe there  
14 was some drive tests that I commissioned. I can't remember.

15 Q. And you testified --

16 A. I do remember testifying about it. I can't remember if I  
17 actually did the drives or if I just commissioned and then  
18 reviewed, but ...

19 Q. In any event, you testified about those drive test results  
20 in court, correct?

21 A. Correct.

22 Q. And the township, the opposing party, hired an independent  
23 company to do its own drive tests, correct?

24 A. Correct.

25 Q. And ultimately the court rejected the drive test analysis

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Petersohn - Cross

1 that you had either performed or oversaw, correct?

2 A. I don't recall.

3 Q. I would like to approach, your Honor. I've given copies to  
4 the government.

5 THE COURT: I'm going to let you do this, but, again,  
6 it sounds awfully much like what I would expect to hear on  
7 cross-examination at trial as opposed to something going to  
8 Daubert, but go ahead.

9 This is an opinion by Henry Perkin, P-E-R-K-I-N,  
10 United States Magistrate Judge for the Eastern District of  
11 Pennsylvania. And having been born and grown up in  
12 Philadelphia, I am, of course, totally predisposed in favor of  
13 any judge from the Eastern District of Pennsylvania.

14 Go ahead.

15 Q. Turning your attention to page 20, the middle of the first  
16 paragraph. Let me know when you've had a chance to read it.

17 THE COURT: Why don't you read into the record what  
18 you want.

19 Q. Sure. So does this refresh your recollection that the  
20 court rejected your drive test results because they did not  
21 include adverse call data?

22 A. I don't see the word rejected. I just see that they point  
23 out that my drive test did not contain any data concerning  
24 adverse call results.

25 Q. In the prior sentence, it reads: "In accordance with the

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Petersohn - Cross

1 analysis conducted in prior cases, this Court must rely on the  
2 statistics provided by MobileNet, that was the company hired by  
3 the opposing party, to determine whether a significant gap  
4 exists. MobileNet specifically documented adverse call results  
5 both in its drive test and in its report. Mr. Petersohn's  
6 drive test, however, did not contain any data containing  
7 adverse call results."

8 THE COURT: Wait. Wait. Before -- and I haven't read  
9 this, but just so that I can follow what you're saying, this is  
10 directed first to counsel. What kind of gap are we talking  
11 about here?

12 MS. HARRIS: This is the kind of -- the gap in cell  
13 phone coverage, which is of the subject --

14 THE COURT: How far a reach?

15 MS. HARRIS: A gap that would necessitate the cell  
16 phone company and give it a right under statute, I believe, to  
17 build a cell phone tower at a specific location. There's a  
18 common civil dispute between townships and small towns perhaps  
19 that don't want large cell phone towers in their back yard.

20 THE COURT: So, AT&T wanted to put up a big tower?

21 MS. HARRIS: Correct.

22 THE COURT: The town said no, and they're fighting it  
23 out. And is it AT&T that says without this there will be a  
24 significant gap?

25 MS. HARRIS: So AT&T is litigating to say we -- our

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Petersohn - Cross

1 data shows that there's a gap in service --

2 THE COURT: Gap meaning that you can't get cell--

3 MS. HARRIS: In coverage area, correct, and that  
4 necessitates the building of a cell phone tower.

5 THE COURT: All right. And what is meant by adverse  
6 calls, ones that don't connect?

7 MS. HARRIS: I was going to ask the witness, your  
8 Honor. That means dropped calls, correct?

9 THE COURT: Well, you offered the opinion, and --

10 MS. HARRIS: Sure. I understand that to be dropped  
11 calls, calls that don't connect, you know.

12 THE COURT: Okay. Fair enough.

13 The opinion says in the paragraph you've just drawn my  
14 attention to: "As indicated above, courts in this circuit have  
15 routinely analyzed the percentage of adverse call results in  
16 determining whether a significant gap exists."

17 I take that to mean from what you just told me and  
18 tried to put it into simple English, that the number of dropped  
19 calls or other similar incompleting calls is a good measure of  
20 whether the coverage is insufficient. Yes?

21 MS. HARRIS: That's my understanding, your Honor.

22 THE COURT: So it goes on to say: "In accordance with  
23 the analysis conducted in prior cases, this Court must rely on  
24 the statistics provided by MobileNet to determine whether a  
25 significant gap exists."



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Petersohn - Cross

1           So, the court seems to be saying there, since the  
2 percentage of adverse call results is a measure of whether a  
3 significant gap exist, we need good statistics about adverse  
4 calls if we're going to determine whether a significant gap  
5 exists. And then it goes on to say: "MobileNet specifically  
6 documented average call results both in its drive tests and in  
7 its report. Mr. Petersohn's drive tests, however, did not  
8 contain any data concerning the adverse call results. Given  
9 the clear precedent of the Circuit, this Court is unclear why  
10 AT&T Mobility failed to focus more exclusively on adverse call  
11 results."

12           So, just reading that paragraph and not having read  
13 the opinion, what the court seems to be saying is why did you  
14 waste time on the drive tests when that doesn't tell us what I  
15 want to know -- I, the court, want to know; namely, how many  
16 dropped calls or adverse calls there were. Isn't that what the  
17 court is saying there?

18           MS. HARRIS: Your Honor, I think what the court is  
19 saying is that drive tests should document and report adverse  
20 call results, and I think that's how the witness previously  
21 described many of the drive tests.

22           THE COURT: No, I don't -- well, we will ask the  
23 witness. The specific sentence says -- I'm not sure any of  
24 this is relevant to the issue before the Court now. But  
25 anyway, the specific sentence is: "Mr. Petersohn's drive

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Petersohn - Cross

1 tests, however, did not contain any data concerning adverse  
2 call results."

3 First question: Is that correct?

4 THE WITNESS: To the best of my memory, yes.

5 THE COURT: Second, is a drive test supposed to  
6 contain data concerning adverse calls?

7 THE WITNESS: In this case we had MobileNet's drive  
8 test, which -- and, you know, specifically with this case here,  
9 what we did was we used MobileNet's drive test to prove our  
10 point. The court ultimately didn't agree with how we did that,  
11 and we also had drive tests done from -- there's a footnote 40  
12 that there was drive tests conducted by Paul Dugan which did  
13 contain data concerning adverse call results.

14 THE COURT: Well, but I thought what you were  
15 testifying to earlier was that in your experience the drive  
16 test showed that the connected calls would go to the tier one  
17 towers as opposed to the tier two in most cases.

18 THE WITNESS: Yeah, for maybe what I would call  
19 baselining test or troubleshooting test where we're kind of  
20 driving a network and closely monitoring this. In a case like  
21 this, we're not concerned who we're connecting to.

22 THE COURT: So that has nothing to do with dropped  
23 calls, does it?

24 THE WITNESS: Well, we would want to know the  
25 percentage of drop -- or how often we're dropping and where

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Petersohn - Cross

1 we're dropping.

2 THE COURT: I'm still not following. Let me try it  
3 again.

4 Let's say the question is, do the calls connect to  
5 towers in the immediate vicinity. And in my hypothetical, ten  
6 calls are placed, and five of them don't connect at all. The  
7 other five connect to towers in the immediate vicinity. The  
8 fact that five didn't connect at all doesn't show anything,  
9 does it, about whether calls, if they do connect, connect to  
10 towers in the immediate vicinity?

11 THE WITNESS: Correct. That would be a 50 percent  
12 adverse call event rate of 50 percent ineffective --

13 THE COURT: Well, let's assume you had three different  
14 sets of calls, and in the first 20 percent were dropped calls  
15 and 80 percent connected to the cell phones in the immediate  
16 vicinity.

17 In the second, 50 percent were dropped calls and the  
18 other 50 percent connected to phones in the immediate vicinity.

19 And in the last, 90 percent were dropped calls and ten  
20 percent connected to calls in the immediate vicinity.

21 That would still be consistent with the hypothesis  
22 that when calls connect, they connect to cells in the immediate  
23 vicinity, wouldn't it?

24 THE WITNESS: Correct.

25 THE COURT: That's why I'm having trouble.

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Petersohn - Cross

1 MS. HARRIS: May I ask a few followup questions, your  
2 Honor?

3 THE COURT: Of course.

4 BY MS. HARRIS:

5 Q. In the hundreds of hundreds of drives tests that you've  
6 conducted for a variety of purposes, has there ever been a  
7 drive test -- withdrawn.

8 In the hundreds of drive tests that you've conducted,  
9 there's never been a drive test in which a dropped call is not  
10 a relevant piece of data, correct?

11 A. Where a dropped call is not a relevant piece of data?

12 Q. Isn't it always relevant if a call is dropped on any of the  
13 drive tests that you've conducted?

14 THE COURT: Relevant to what?

15 A. No.

16 Q. To --

17 THE COURT: Pardon? I'm objecting to the question.

18 MS. HARRIS: Fair, Judge. Fair.

19 Q. Let me put it this way: Have you ever done a drive test  
20 where the sole purpose of the drive test was to determine  
21 whether the cell phone was connecting with the closest or  
22 second closest tower?

23 A. No.

24 Q. That's not why drive tests are done, correct?

25 A. Never the sole purpose.

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Petersohn - Cross

1 Q. It might be a relevant fact in connection with other data  
2 that you're collecting, correct?

3 A. It's not something we would drive for because it's really a  
4 given. It's --

5 Q. As long as the network -- as long as you have a signal and  
6 the cell phone is connecting to a tower, that's the relevant  
7 piece of information, correct?

8 A. Well, no, we want to see which tower as you move through  
9 the environment you're connecting to, but we know that it's  
10 going to be one of the towers in the vicinity. We do the drive  
11 tests to get into the minutiae of where it hands off between  
12 tower A to B that are the two closest --

13 Q. Fair. That's for the handoff issue to make sure there's  
14 seamless coverage; that someone is traveling and they don't  
15 have a dropped call, for example, in the middle of a telephone  
16 call, correct?

17 A. Or that you're not dragging site A too far into site B's  
18 area because of any number of reasons.

19 Q. Well --

20 THE COURT: I'm sorry. Maybe I haven't fully  
21 understood. What's a drive test?

22 THE WITNESS: So, drive test would be, you know, when  
23 you're out on the road with specific specialized equipment and  
24 software collecting information about the network through the  
25 use of scanners, phones, sometimes both.

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Petersohn - Cross

1 THE COURT: What's the purpose -- what's the ordinary  
2 purpose of a drive test?

3 THE WITNESS: Well, the purpose of having the phones  
4 on board is to actually test the interaction with the network.  
5 And then having the scanner on board, which is back to the  
6 purpose of our drive here, but having a scanner on board, we  
7 use an externally mounted antenna with the scanner, that way we  
8 can see what servers are getting -- you know, what sites are  
9 getting into an area, and can we compare that to our  
10 propagation model. That was really the purpose of our drive.

11 THE COURT: And you compare that to a?

12 THE WITNESS: To a propagation modeling.

13 THE COURT: What is a propagation model?

14 THE WITNESS: It's computer software we use at our  
15 desks where we can say here's our existing site of sites.  
16 Here's the environment. We know how tall the trees are. We  
17 know what the terrain looks like. And then we can model how  
18 the cellular network will behave in a given area, and we use  
19 that very commonly, much more so than drive testing. When  
20 we're putting on evidence for municipal-type hearings, we  
21 demonstrate a gap in coverage typically through propagation  
22 modeling, and 99 times out of a hundred that's the accepted  
23 method and really all we need to do. It is the exception when  
24 we need to actually do drive testing for a municipal hearing  
25 and then into a court case.

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Petersohn - Cross

1 THE COURT: So you've been hired, have you not, to do  
2 drive tests?

3 THE WITNESS: I have.

4 THE COURT: And the people who hired you -- I'm not  
5 talking about this unusual case that we just looked at, but in  
6 the normal commercial sense, what is the reason you're being  
7 asked to do a drive test?

8 THE WITNESS: In the case of a municipal hearing would  
9 be to either demonstrate or corroborate that our propagation  
10 modeling is accurate and/or to establish the existence of a gap  
11 through adverse call event statistics.

12 THE COURT: So it's not for the purpose -- I think  
13 this is what counsel was just getting at. It's not for the  
14 purpose of determining which sites non-adverse calls connect  
15 to.

16 THE WITNESS: Right, not in the case of a municipal  
17 hearing where we may need a tower approved.

18 THE COURT: But you observe that from the data that it  
19 generates?

20 THE WITNESS: You could if you want to look at that  
21 aspect of the drive, but generally that's not important for  
22 this type of drive.

23 THE COURT: Right. So if it's your opinion that the  
24 calls in this case connected to nearby cell sites, it has  
25 nothing do with your experience in conducting drive tests, does

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Petersohn - Cross

1 it?

2 THE WITNESS: Well, this is just one type of drive  
3 test that we would do for, let's say, a municipal hearing. The  
4 majority of the drive tests I've done over the years were  
5 connected to baseline drive testing for the carriers who were  
6 looking at their performance where we are concerned with --

7 THE COURT: Well, that's what I was trying to get at  
8 before when I said normal. So normally you're hired by a  
9 carrier to do a drive test?

10 THE WITNESS: Yeah. Yeah, typically or a tower  
11 developer or --

12 THE COURT: And the purpose there is to see how well  
13 or how poorly the equipment is operating in terms of  
14 connectivity?

15 THE WITNESS: Well, it depends on what the -- what the  
16 scope of work is. If it's -- it really depends on the scope of  
17 work.

18 THE COURT: All right, counsel.

19 MS. HARRIS: I'm going to ask maybe a few followup  
20 questions along these lines.

21 BY MS. HARRIS:

22 Q. It's hypothetically possible to do a drive test to document  
23 whether a cell phone connects with the closest or second  
24 closest tower, correct?

25 A. Is it hypothetically possible, is that the question?



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Petersohn - Cross

1 Q. Yes, right.

2 A. Yeah, for sure.

3 Q. But the drive tests that you've conducted were never  
4 conducted for that particular purpose, correct?

5 A. Are we talking about the drive tests in general or...

6 Q. The drive tests that you over the 25 years that you've been  
7 doing this, the drive tests that you've conducted, you've never  
8 conducted in order for the sole purpose of determining whether  
9 it's connecting to the closest or second closest cell site?

10 A. No, that would never be the sole purpose of a drive test.

11 Q. And, in fact -- and going back to this case from 2009, in  
12 that case, adverse call events were a relevant data point,  
13 correct, to the issue at hand in the litigation?

14 A. Were a relevant, did you say, or irrelevant?

15 Q. Were relevant.

16 A. In the opinion of the court, yes, they were relevant. We  
17 were conducting our drive test more as a corroboration of the  
18 propagation model, which is why we didn't look at those, and we  
19 had some other drive tests that we used for that purpose in  
20 this specific instance.

21 Q. And didn't the court find on page 21 that AT&T Mobility,  
22 which was the company for which you were working, failed to  
23 separate out the percentage of adverse call events for each  
24 provider; that its failure to do so is suspect given the  
25 Court's determination below?

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Petersohn - Cross

1 THE COURT: I don't see that that has anything do with  
2 this Daubert hearing. You have effectively demonstrated,  
3 subject to what the government will raise on redirect, that the  
4 drive tests that this witness conducted were not done for the  
5 primary purpose or the sole purpose of determining location,  
6 and I think that's highly relevant.

7 MS. HARRIS: We'll move on, Judge, no problem.

8 THE COURT: But the fact that this magistrate judge  
9 didn't like either MobileNet or some failure to -- I wouldn't  
10 even allow it in a trial, I don't think. It doesn't really go  
11 to this witness's credibility.

12 MS. HARRIS: It's not about credibility, your Honor.  
13 It's simply because of the absence of written records about his  
14 methodology and about data, this is the one document we have  
15 from the hundreds of tests he's done to reflect --

16 THE COURT: I understand that --

17 MS. HARRIS: So, that's all.

18 THE COURT: I understand any port in the storm or  
19 let's see what other cliché a drowning man grasp at straws, but  
20 I think you should move on.

21 BY MS. HARRIS:

22 Q. So you testified that in West Farms, T-Mobile sites are  
23 approximately five to six blocks apart, correct?

24 A. Correct.

25 Q. And these are macro cell sites generally, correct?

L7DQscaO

Petersohn - Cross

1 A. I did observe some small cell type of facilities also. I  
2 can't recall how many in that -- in the cluster that I did  
3 observe, but the majority were macro towers, yes.

4 Q. And they each had different -- when you say macro towers,  
5 you mean these are towers that are divided into three sectors  
6 typically, correct?

7 A. Generally, a macro tower nowadays implies it is at least a  
8 sectorized site, maybe not three, maybe two, maybe sometimes  
9 four. But macro more refers to the equipment being full-power  
10 equipment, and that the antennas are full arrays of antennas in  
11 the sectors.

12 Q. Understood. But you didn't look at the Kingsbridge  
13 neighborhood in the Bronx, correct?

14 A. Kingsbridge neighborhood, no, I don't believe so.

15 Q. You didn't look at Morris Heights, correct?

16 A. Don't believe so.

17 Q. Or East Tremont?

18 A. Don't believe so.

19 Q. In any event, your estimate about the scope of coverage is  
20 just that, an estimate, correct?

21 A. Could you be more specific with the question? You mean  
22 from an individual site?

23 Q. You have an opinion that the coverage area would be roughly  
24 two to three blocks based on the placement of cell sites in  
25 West Farms?

L7DQscaO

Petersohn - Cross

1 A. Yes, it's in West Farms. Yeah.

2 Q. But that estimate is just an approximation, correct?

3 A. Correct, only an approximation.

4 Q. And that's because signal strength on any given day is not  
5 static, it's not fixed, correct?

6 A. Right. Received signal strength will fluctuate for a  
7 number of reasons.

8 Q. We talked a little bit about load density, right?

9 A. Yes.

10 Q. So busy bars might affect low density, correct?

11 A. Sure.

12 Q. Sporting events, correct?

13 A. Yes.

14 Q. Traffic network, traffic generally could affect load  
15 issues, correct?

16 A. Correct.

17 Q. Service problems with a particular cell tower, correct?

18 A. Correct.

19 Q. And in response to those external factors, coverage area  
20 can expand sometimes, correct?

21 A. Correct.

22 Q. And contract other times?

23 A. Correct.

24 Q. It's designed to work seamlessly so that there aren't these  
25 gaps in service that the telecommunications companies are so

L7DQscaO

Petersohn - Cross

1 concerned about, correct?

2 A. Yes.

3 Q. And they do that as needed and fluctuates over time,  
4 correct?

5 A. Yes, when you say they do that though, I'm not quite sure  
6 what you mean.

7 Q. I'm sorry. I'm giving a personhood to the cell site  
8 towers. I'm saying the cell sites themselves and coverage  
9 areas associated with them fluctuate over time depending on  
10 external factors, correct?

11 A. Correct, yes.

12 Q. And you just mentioned that there are some omnidirectional  
13 antennas or these micro sites that you observed?

14 A. I did observe at least two that I can recall in the area.

15 Q. And you told the government, I think, that their designed  
16 or they're not designed for roughly more than a 1,000 feet  
17 area, correct?

18 A. That's a typically coverage radius from a small cell or  
19 micro-cell facility.

20 Q. But fair to say that your average city block is about  
21 300 feet, correct?

22 A. I think that's a fair estimate. I'd have to really do some  
23 scaling to say for sure, but that doesn't seem out of line.

24 Q. I know you're a Philly guy, it sounds like, right, but fair  
25 to say 20 city blocks is approximately a mile, correct?

L7DQscaO

Petersohn - Cross

1 A. It sounds plausible.

2 Q. And, again, so if 300 feet is approximately one block, a  
3 thousand feet could cover three blocks, correct?

4 A. It could, yep.

5 Q. And these -- this again, is the micro site or the  
6 smaller-powered sites, correct?

7 A. Right, the thousand feet I think was kind of an upper limit  
8 coverage footprint that I was discussing. I wouldn't expect  
9 one to cover more than that.

10 Q. And, again, fair to say that on any given day you cannot  
11 determine exactly what the coverage area is because it's  
12 affected by these external factors, correct?

13 A. You can't say exactly what the coverage area is, correct.

14 Q. One last topic. Phones are constantly changing towers that  
15 they're pinioned to, correct?

16 A. Do you mean when they're on a call or when they're --

17 Q. Let me phrase that a little better.

18 THE COURT: She means you have to go buy a new phone  
19 from Verizon every few months so they can charge more. I think  
20 that's what you're getting at, right?

21 MS. HARRIS: That's right. All roads lead to the same  
22 results.

23 Q. Fair to say that a phone is constantly assessing which cell  
24 sites will provide it with a best quality signal, correct?

25 A. Yes.

L7DQscaO

Petersohn - Cross

1 Q. So during a call, if you're in the middle of a call, even  
2 if you're not moving, the phone could switch cell sites that it  
3 connects to, correct?

4 A. Yes, it could.

5 Q. Because in the middle of the call something could be  
6 happening between the cell sites that redirects the radio waves  
7 to cell site B as it is now ranked higher, correct?

8 A. Right, a semi-could park next to you and, you know, block  
9 the line of site to a tower that was equidistant from another  
10 tower, and, yes, so any number of factors.

11 Q. That's even if the cell phone user not moving, correct?

12 A. Correct.

13 Q. And if the cell phone user is moving, for example, in a car  
14 it's quite likely that the phone during a phone call would have  
15 to switch towers during the course of the phone call, correct?

16 A. Yes.

17 Q. Now, you talked a lot about cell phone coverage -- excuse  
18 me -- cell site tower -- sorry, it's been a long day -- cell  
19 tower coverage areas overlapping, correct?

20 A. Yes.

21 Q. And their coverage areas have to overlap to ensure smooth  
22 handoffs, correct?

23 A. Yes.

24 Q. So, a cell phone could be within the coverage range of  
25 several cell towers at one time, correct?

L7DQscaO

Petersohn - Cross

1 A. Yes.

2 Q. Now, I have one last question which relates to -- I think  
3 we're deeming exhibits from both sides in evidence. Is that  
4 fair, Mr. Balsamello?

5 The Government Exhibit -- I want to talk about  
6 Government Exhibit 2 -- excuse me -- 3.

7 THE COURT: I have hard copies if you want to give the  
8 witness a hard copy to move this along.

9 MS. HARRIS: Sure.

10 THE COURT: This is Government Exhibit 3, I believe.

11 BY MS. HARRIS:

12 Q. You said you verified the existence of the cell sites at  
13 issue in this case by using Google Earth and Google Earth Pro,  
14 I believe, correct?

15 A. Yes.

16 Q. Is this one of the -- I'm not exactly sure, is this one of  
17 the documents you used as a printout of the photographs you  
18 reviewed?

19 A. Yes, I -- this is the document that I produced, yes.

20 Q. Just for the sake of completeness, I'm going to also give  
21 the witness Government Exhibit 5, which is a similar  
22 document --

23 THE COURT: Let me see what you're looking at. Yes,  
24 to confirm for the record, this is Government Exhibit 3. Go  
25 ahead.



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Petersohn - Cross

1 MS. HARRIS: This is Government Exhibit 5, which I'm  
2 also handing the witness, your Honor.

3 THE COURT: Okay.

4 Q. Looking at Government Exhibit 3, the first photograph has a  
5 little mini screen shot that says August 2011, correct?

6 A. Yes. Yeah, the -- the inset photograph does have that says  
7 street view - August 2011.

8 Q. I think you said on direct that you were able to verify  
9 cell sites that were involved in this case at or around the  
10 time of the events in question. Is that right?

11 A. I don't remember the exact phrasing I used, but that sounds  
12 like something I'd say, yes.

13 Q. When you went through the cell site and you got the  
14 latitude and longitude for each of the cell sites at issue in  
15 this case, correct?

16 A. Yes.

17 Q. And then you plugged those into Google Earth and tried to  
18 look to see if you could actually see a cell site, correct?

19 A. That's right.

20 Q. But you had to use a historical version, is that right, of  
21 Google Earth to go back in time, correct?

22 A. That's right.

23 Q. Now, did you ever encounter problems in accessing a street  
24 view or a clear enough view in the historical Google Earth in  
25 order to make a determination that the cell sites were in

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Petersohn - Cross

1 existence in 2016 or 2017?

2 A. I don't think there was as much of a clarity issue as more  
3 available dates type of issue that hampered. So when there  
4 wasn't a date close, I would always go prior, you know, knowing  
5 that it was there prior. It's very, very rare that any type of  
6 facilities are decommissioned. I only know of a couple, and  
7 they were for extreme cases. So, if there's a facility there,  
8 let's say, as in the first case here in August of 2011, I think  
9 that says, there's an extremely high likelihood that it would  
10 be there in '16 and '17.

11 Q. But sitting here today, can you tell us for which cell  
12 sites that the government on the list the government gave you  
13 were you not able to use maps or visuals in existence of the  
14 dates in question December 2016 and June 2017 to verify the  
15 existence of the cell site?

16 A. I guess I'd have to piece through here and count, but it  
17 was -- it was -- it would have been rare to find a  
18 November 2016, not to say that there isn't one in here, but  
19 they don't -- Google doesn't drive these, you know, every month  
20 or every week or every -- as far as I know on any type of  
21 seemingly set schedule. I'm sure they have some schedule, but  
22 it doesn't seem to be a clockwork-type fashion where it's every  
23 year. So we kind of can only -- we can only rely on what's  
24 available, and in some cases the date was significantly prior  
25 to the date entry in the CDR.

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Petersohn - Cross

1 Q. So, for example, in the first page of Government Exhibit 3,  
2 there's a picture of a building, and then the inset says  
3 August 2011. Can you tell us for which cell site this  
4 corresponds, this image?

5 A. So, it's the cell site -- this is a small cell that is  
6 represented in the CDR with the address of 1751 Jerome Ave.  
7 although I note here that that cell site is not at 1751 Jerome  
8 Ave. It is at the latitude and longitude given in the CDR. I  
9 have my suspicions as to why that is, but I don't know for sure  
10 why there is that mismatch, but again, we rely on the latitude  
11 and longitude of the CDR, not necessarily address.

12 Q. So, if we have in Government Exhibit 3 a picture from  
13 August 2011, that means that that's the closest date that you  
14 were able to find in Google Earth to correspond to the latitude  
15 and longitude and the dates in question in this case, correct?

16 A. I think so. I'd have to recreate the creation of this, and  
17 double check that to say for sure that there wasn't an  
18 available date closer and perhaps I just scrolled too far back  
19 or missed it, but I would assume so, yes.

20 Q. So it looks like for -- we just talked about August 2011,  
21 but it looks like the one below it is for June 2014, correct?

22 A. Correct.

23 Q. If we turn the page on Government Exhibit 3, there's one  
24 on, I guess it's the third page, from August 2012, correct?

25 A. Yes.

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Petersohn - Cross

1 Q. And then turning your attention to Government Exhibit 5, on  
2 the first page, could you explain -- withdrawn.

3 Is there any way to determine whether this image, what  
4 date in Google Earth or historical Google Earth this image is  
5 taken from?

6 A. There is a scale that's not really visible in the top left  
7 here that has the date slider on it, and if we have the  
8 electronic version, maybe we could zoom in on that, but I don't  
9 think from this version we can tell.

10 Q. So we don't know --

11 A. Not from this version of the document. I think from the  
12 electronic document we could zoom in and see what that date is,  
13 but not on this paper version.

14 Q. I'm actually not sure we have interactive exhibits provided  
15 to us by the government, but, in any event, this page, first  
16 page of Government Exhibit 5 is the red dot on the photograph  
17 where you believe you were able to identify the cell site?

18 A. The red dot are the locations from either the CDR or the  
19 historical cell site location. Actually, I take that back.  
20 They are from the -- red dots from the historical cell site  
21 location information data that I was given.

22 Q. And it's your testimony that you were actually able  
23 somewhere on this photograph to identify a cell site in  
24 existence?

25 A. Yes, in the electronic copy. And as I look at it now, it's

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Petersohn - Cross

1 difficult to see what I saw. I believe some of the shadows in  
2 the western -- if we look at the picture below, we can see  
3 there is an antenna array on the western corner of that  
4 building. And although it doesn't look like much to most  
5 people, but I look at a lot of these so I can kind of pick out  
6 what I would believe to be antenna array shadows, and I see  
7 some on that western side of the upper picture. So I had a  
8 very strong feeling that there was a cellular facility there in  
9 this picture, although the picture is admittedly pretty blurry.

10 Q. Again, looking at the image we put in front of you, you  
11 can't tell what date this was taken, this Google image was  
12 taken, correct?

13 A. No, not from this, but again, from the electronic copy that  
14 I provided, I believe you can zoom in there.

15 Q. Fair to say that when there's renovation or construction,  
16 cell site towers move, correct?

17 A. Occasionally. It's not very common.

18 Q. Well, if a building is demolished, correct.

19 A. Correct.

20 Q. And a new building is built up?

21 A. Correct.

22 Q. And, in fact, new towers might be moved -- towers might be  
23 moved in connection with optimizing cellular coverage, correct?

24 A. No, not really, not -- we don't tend to move them just for  
25 an optimization reason, we wouldn't pick up and move them. We

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Petersohn - Cross

1 may construct another or we may seek to modify, move the  
2 antennas around a little on a rooftop. It's very, very rare we  
3 would actually pick up and move a site just for an optimization  
4 reason.

5 Q. If you're upgrading network from 3G, 4G, 5G, you might need  
6 a new cell site, correct?

7 A. What we typically do is we leverage the existing assets, so  
8 if we have a lease for a rooftop and we already have a sector  
9 of antennas there, we'll swap out an antenna to add the 4G or  
10 5G or we'll add some radios to an existing cell site. It's not  
11 to say we don't build new sites. We build new sites and  
12 densify the network.

13 Q. Just to be clear, you don't service T-Mobile in the West  
14 Farms area of the Bronx, correct?

15 A. When you say service, do you mean service the sites or --

16 Q. Correct.

17 A. No, I don't service the sites for T-Mobile anywhere.

18 Q. And you aren't familiar with how frequently they're built  
19 or taken down in the West Farms area of the Bronx, correct?

20 A. Not specifically, no. These are general practices of  
21 nationwide companies.

22 MS. HARRIS: Can you hold on one minute, your Honor?

23 I have no further questions, Judge.

24 THE COURT: Redirect.

25 MR. BALSAMELLO: Thank you, your Honor.

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Petersohn - Redirect

1 REDIRECT EXAMINATION

2 BY MR. BALSAMELLO:

3 Q. A few matters regarding exhibits. With the Court's  
4 permission, Ms. Hernandez, can you pull up Google street view,  
5 the actual website on our screen right now, for the Court and  
6 witness and parties.

7 THE COURT: It's okay with me, but I must say, I don't  
8 see the relevance from a Daubert hearing of this whole  
9 discussion from either side. If the question is how do you  
10 know that the sites that are supposed to have been at locations  
11 X, Y and Z were actually there at the relevant time, and the  
12 answer is we know because we saw them on the Google  
13 photographs, that doesn't in my mind implicate any question of  
14 expertise.

15 The jury can say that's not a good method because, as  
16 was pointed out, we don't have the dates in some of these  
17 photographs and building can be demolished and so forth. And  
18 the government can say, well, it's still pretty good for  
19 whatever reason. I don't understand how any of that raises a  
20 Daubert issue. It's a classic cross-examination issue for the  
21 jury. They can evaluate from their own experience.

22 MR. BALSAMELLO: If the Court has concerns about this  
23 issue, we can address everything that was just raised on cross,  
24 but I won't belabor the point if it doesn't serve any purpose  
25 of this motion for the Court.

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Petersohn - Redirect

1 THE COURT: Go ahead. Move on to something else.

2 BY MR. BALSAMELLO:

3 Q. Mr. Petersohn, do you recall in cross-examination you were  
4 asked whether, I believe the phrase was it would be a problem  
5 for mapping a communication if the location data for that call  
6 or that text were omitted from the CDR, you would be unable to  
7 map the location, the cell site hit if the data were omitted,  
8 right?

9 A. If there were a latitude-longitude omission, there would be  
10 nothing to map, so we couldn't map it.

11 Q. Would the inability to map one entry on a CDR because of  
12 the omitted data have any bearing on the accuracy or the  
13 ability to map the communications for which data is present?

14 A. No.

15 Q. Mr. Petersohn, you were asked, I believe a few times, if a  
16 phone is trying to connect to option A, but it can't because of  
17 obstructions, it would look for option B, right?

18 A. Yes.

19 Q. I believe the phrasing used on cross-examination was that  
20 why the phone would consider option B would be based on  
21 strength and clarity or quality, not necessarily on the  
22 proximity of the second closest site, correct?

23 A. Correct.

24 Q. What, if any, factor weighs most heavily in determining  
25 which ultimately is the strongest and clearest?



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Petersohn - Redirect

1 A. Number one would be proximity. And then the other factors  
2 that we've already discussed: Obstructions, manmade clutter,  
3 environmental clutter, terrain.

4 Q. Turning to drive tests. Are there certain types of drive  
5 tests you've done where even if the sole purpose wasn't to  
6 observe which towers a phone was connecting to, you  
7 nevertheless were observing which towers they were connecting  
8 to?

9 A. Yes.

10 Q. What kind of drive tests were those? What was the purpose  
11 of those tests?

12 A. Performance evaluating drive tests where in realtime  
13 through the software we can move the -- we can move things  
14 temporally where we can watch second-by-second the phone travel  
15 through the geography; and as we're moving through time, the  
16 software will actually show you what cell is serving, what your  
17 second best serving cell is, your third, etc. As you move  
18 through the geography, and using the sophisticated software,  
19 we're actually recreating back at our desks after collecting  
20 data the exact chronology of the call.

21 Q. And of the many drive tests you've done, can you  
22 approximate how many have been of that sort as opposed to the  
23 municipal hearing types that you've testified about?

24 A. Hundreds, hundreds of the aforementioned.

25 Q. And are those the tests you were referring to when you

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Petersohn - Redirect

1 testified about your observations that phones typically connect  
2 to that or consistently connect to that first tier of sites?

3 A. Yes.

4 MR. BALSAMELLO: One moment, your Honor.

5 THE COURT: All right. Anything else?

6 MR. BALSAMELLO: I'm sorry, just one moment.

7 Your Honor, unless there are any other issues that the  
8 Court had for this witness, the government has nothing further.

9 THE COURT: I have nothing more. But if defense  
10 counsel has any surrebuttal.

11 MS. HARRIS: Very kind invitation, but nothing  
12 further, Judge.

13 THE COURT: Very good. Very good. You may step down.

14 (Witness excused)

15 THE WITNESS: Would you like me to remain available?

16 THE COURT: No. I mean, it's a public court. You're  
17 welcome to sit here and watch, but if you would prefer to go  
18 home, where is home?

19 THE WITNESS: Back to Philadelphia.

20 (Discussion off the record)

21 THE COURT: Just before we take a break, I don't see  
22 any reason to call any other witness.

23 MR. BALSAMELLO: The government was going to propose  
24 the same, your Honor. We think we've covered the issues. We  
25 have an individual from T-Mobile.

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Petersohn - Redirect

1 THE COURT: I think we will take a break, and then I  
2 will hear oral argument on any of the issues that have been  
3 raised. Ten minute break.

4 (Recess)

5 THE COURT: Before I forget, let me thank the marshals  
6 for being so good. This hearing going late. I'm sorry it's  
7 going so late, but it will be over fairly soon.

8 Let me hear from -- I don't -- I'm happy to hear  
9 anything you want to say about any issue, but the question of  
10 403, which I determined in excluding the government's witness  
11 in a prior recent case, Nieves, was very, very, very much  
12 impacted by what had occurred in the trial before then. And  
13 that's true in my view of most 403 rulings. I doubt I am --  
14 I'm skeptical that a 403 basis for excluding a witness here is  
15 likely to prevail given Second Circuit view of Rule 403. But  
16 even assuming it did, I don't see how I could make a 403  
17 determination until right before the witness is offered at  
18 trial.

19 So you're welcome to say anything you want, but you  
20 will have plenty of future opportunities and more relevant  
21 opportunities later on.

22 As for the motion to suppress, I think I have on paper  
23 everything I need on that with the possible exception of  
24 anything defense counsel wants to argue based on the March 20  
25 warrant; but we'll hear from counsel in a minute.

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Petersohn - Redirect

1 And as for the motion to compel discovery of  
2 contraband cell phone use at the MCC, that motion is denied for  
3 reasons I will set forth in writing.

4 And the motion to sever Mr. Scales' trial from  
5 Mr. Horge's trial has already been granted.

6 So, there you go, you are batting 500 at the moment,  
7 by comparison with the Yankees who are batting about 110.

8 So, in any event, what I do want to hear argument on  
9 is the Daubert issue.

10 Let me hear first from defense counsel.

11 MS. HARRIS: Thank you, Judge. If I stand up  
12 straight, you can still hear me?

13 THE COURT: Why don't you go over to the roster,  
14 that's probably best.

15 MS. HARRIS: Okay. So, in large part, I think between  
16 witness, the government and us, we agree about many things,  
17 which is about the way radio waves work and certainly the way  
18 the system is intended to work, cell site networks are intended  
19 to work, and that is often or sometimes the cell site with the  
20 strongest signal is often a cell site in close proximity to the  
21 cell phone user.

22 THE COURT: So, here is what I gathered from the  
23 testimony and you might want to attack it if you think I have  
24 misunderstood it. It seems to me that this witness was able  
25 through his training and his understanding of how cell phones

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Petersohn - Redirect

1 and cell towers work to make at least an admissible case that  
2 the physics of it are that the cell phones are programmed to  
3 seek the strongest signal they can find, and the strongest  
4 signal they can find is first and foremost a matter of  
5 proximity, though it can also be affected by obstructions and  
6 things of that sort. And the only other relevant issue is not  
7 a Daubert issue, which is where the cell phones -- where the  
8 cell towers, where they purportedly are said to be or is the  
9 Google photographs not an adequate way to establish that,  
10 that's not a Daubert issue because the jury can evaluate that  
11 just as well as any other person that's it's not a scientific  
12 issue at all. It's a simple matter of lay argument.

13 So, all the rest seems to me to be window dressing at  
14 best. By the way, there are plenty of other things that I'm  
15 sure defense counsel will want to inquire about at trial, like  
16 even assuming he was in the vicinity, of course he was in the  
17 vicinity, he was visiting his mother or his cousin or whatever,  
18 and they were all within the vicinity, and there can be a  
19 debate about how far the vicinity extends.

20 But I think the Daubert issue really all comes down  
21 basically to the physics of how cell phones operate and the  
22 fact that given that cell phone signal strength decreases  
23 inversely with the square of the distance, there is a built-in  
24 strong likelihood that the strongest connection will be the one  
25 that's closest or at least certainly in the near vicinity. And

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Petersohn - Redirect

1 why isn't that enough to allow this evidence in?

2 MS. HARRIS: So, just to frame the question as I  
3 understand it, your Honor, the Daubert question, we're using  
4 Daubert obviously to refer to the controlling Supreme Court  
5 precedent, but that itself was looking at the linchpin of  
6 reliability which is obviously embedded within Rule 702 as the  
7 gatekeeping principle for whether or not evidence should come  
8 in. So in terms of I would say the scientific methodology --  
9 and I do have concerns about that, and I'm going to talk about  
10 that, and address that specifically, but I think the question  
11 of the Google maps or the question of what does the first tier  
12 of cell phones -- cell sites mean in terms of numbers and  
13 distance all go to the question of reliability because,  
14 frankly, if the expert testimony -- if the expert is to say --  
15 he didn't say this, but hypothetically you can roughly  
16 determine within a half mile radius of where someone is, that's  
17 not very relevant -- that's relevant to deciding if this is  
18 sufficiently reliable evidence for the government to use in a  
19 prosecution for the kinds of crimes we're talking about here.

20 THE COURT: No. No. This was a little bit what we  
21 discussed at the sidebar. If the government says -- I'll put  
22 it in hypothetical terms.

23 Mr. Jones on January 4, 1890 was at 42nd Street and  
24 Times Square, and all the cell phone shows is at least a  
25 permissible inference that he was in the general vicinity of

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Petersohn - Redirect

1 Times Square, but he might have been six blocks away, he might  
2 have been, in the defense's view, 10 blocks away or 15 blocks  
3 away, it would still be relevant evidence as opposed to  
4 showing, oh no, he was in Weehawken or Plymouth Meeting. So I  
5 think that's all the government is offering this for.

6 MS. HARRIS: Well, I agree with your Honor, so we will  
7 defer that discussion to closer to trial where I think both the  
8 Court and all of us will have a better idea of exactly what the  
9 government is going to try to do.

10 THE COURT: You think it's more prejudicial than  
11 probative.

12 MS. HARRIS: Right. So I'm happy to defer that  
13 question.

14 I think with respect to the question of science, your  
15 Honor, there is a third part to the question your Honor posed,  
16 which is, yes, radio waves work this way; yes, the equation  
17 means that strength of signal dissipates over distance --  
18 though I don't think the witness was clear over what  
19 distance -- but over distance, and that systems are designed  
20 such that cell phones connect to the strongest signal. Those  
21 two propositions we don't dispute. But I think there's a third  
22 part which is important, which is that every -- the witness  
23 himself admitted that it's not always true, obviously, that the  
24 strongest signal is the closest signal. It's just not. It's  
25 not a fact in the world. And that's a fairly common

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1 occurrence.

2 And the question we would ask the Court to consider  
3 for Daubert purposes is how often does it not connect to the  
4 closest signal, to the closest cell site, or how often does it  
5 connect to the top tier -- excuse me -- the first tier, which  
6 could include four cell sites in the vicinity. And that  
7 question, which is the likelihood ratio -- that's the comfort  
8 zone of probability saying how likely is it? And the witness  
9 gave is opinion that said in the vast majority of cases, it's  
10 going to connect. And it's that opinion that we are all  
11 relying upon to have this evidence come into court in this  
12 trial.

13 THE COURT: Just so I understand the point you're  
14 making, everyone agrees that it goes to the strongest signal  
15 and that the strongest signal is not necessarily from the  
16 nearest tower, the geographically nearest tower. But to answer  
17 how often it goes to a different tower, one needs to know what  
18 obstructions there are, how close the other towers are. If the  
19 other towers are all very close, as the witness indicated, and  
20 if the obstructions are more or less, you know, endemic to this  
21 part of the Bronx, a reasonable jury could conclude that it  
22 wasn't necessarily this tower, it might have been this or this  
23 or this other tower, but they were all still in the same  
24 vicinity, which is all I think the government is trying to get  
25 from this witness.



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1 MS. HARRIS: Your Honor --

2 THE COURT: For you to have a Daubert argument, you  
3 would have to say, no, it would go to a cell tower or at least  
4 it is reasonably likely to go to a cell tower that is five  
5 miles away or even --

6 MS. HARRIS: No.

7 THE COURT: -- one mile away, and there is no basis I  
8 think for that suggestion on the evidence presented here.

9 MS. HARRIS: So, if that is the Court's standard,  
10 you're right, we're not going to be able to make a one-mile or  
11 five-mile argument. But I submit -- and I think we're going to  
12 end up revisiting this issue in full on a 403-related ground  
13 when we specifically examine the government's exhibits and the  
14 maps that they've presented, but I do believe that the question  
15 that the witness revealed that the underpinning for his opinion  
16 that in the vast majority of cases, it always connects to  
17 either the closest or a cell site within the first tier, which  
18 is a grouping, a loosely grouped "in the vicinity" kind of  
19 amorphous category of cell sites. My Daubert claim is that  
20 that opinion is not supported by any scientific methodology, by  
21 any data, by any test. And I will submit your Honor it is  
22 possible to do that, you know --

23 THE COURT: I'm sorry.

24 MS. HARRIS: It is possible. Someone in the world who  
25 wanted to make this -- this is essentially an off-label use of

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1 cell site technology, what the law enforcement does in all  
2 these cases because it was not designed for this purpose; the  
3 records are not collected for that purpose. The drive tests  
4 that are conducted by people like Mr. Petersohn are not  
5 conducted for this purpose. Someone could conduct a drive test  
6 survey and could collect scientific data to say over time and  
7 in different situations how frequently --

8 THE COURT: Yes, I agree with that, but I don't see  
9 that that is a sufficient reason to exclude the evidence. What  
10 you are saying is, there's still an element of uncertainty that  
11 could be minimized by conducting the kind of drive tests you  
12 have in mind, and that may well be true. The government is  
13 stuck with what was done, but unless what was done is  
14 insufficient to give rise to meet the Daubert standard of  
15 reliability, other than that, it's still admissible.

16 But let me hear from the government. We'll come back  
17 to defense counsel in a minute.

18 MR. BALSAMELLO: Thank you, your Honor.

19 I don't have very much to add. I think the Court has  
20 summarized the testimony and the government's view of the  
21 situation quite well. I think we intend to offer, as I've seen  
22 historically in cases in our office, testimony that  
23 appropriately acknowledges the nature of this evidence, and the  
24 aspects of the evidence that the defense is pointing out could  
25 go to its weight and the possibility that a phone is not

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1 connecting to the absolute nearest. That's routinely part of  
2 the testimony we put on as part of a cell site presentation,  
3 and we would do that here. I think many of these issues, if  
4 they're not raised on direct -- and many of them will be -- may  
5 be fertile ground for cross-examination. But Mr. Petersohn, I  
6 believe, established that the science itself is quite sound.  
7 And Mr. Donaldson, I believe -- who would be our testifying  
8 expert at trial, because he did the mapping, he's the one who  
9 plotted the map -- when he testifies about what he has learned,  
10 the principles about how cell sites work, the Court should now  
11 have, we believe, ample comfort that those principles are  
12 accurate.

13 THE COURT: The only thing that gave me a little  
14 trouble -- I don't know that anything was added. Maybe  
15 something that contributed to confusion was the distinction  
16 between tier one, tier two, etc. Again, I think the physics of  
17 it is that these phones are programmed to seek the strongest  
18 signal. That signal is, a reasonable jury could find, much  
19 more likely to be generated by something, by a tower in the  
20 vicinity than one that's not in the vicinity because of the  
21 overwhelming tendency of the signal to decrease geometrically  
22 with distance. And so I don't know that anything wonderful was  
23 added other than possibly confusion by talking about tier one,  
24 tier two, or whatever.

25 MR. BALSAMELLO: I think my interpretation -- and the

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1 Court obviously may have heard the differently, but my  
2 interpretation of the use of tier one was a way to say if a  
3 phone is in the middle of a circle of towers, tier one is  
4 simply that nearest band of towers; that it's the closest one  
5 in each direction; it's the most proximate.

6 THE COURT: Well, if it's just, as you say, reducible  
7 to simple English, then maybe we should just reduce it to  
8 simple English and forget about tier one.

9 MR. BALSAMELLO: I agree. I don't think Mr. Donaldson  
10 would use the phrasing of tier one versus tier two. I think he  
11 would simply say connect to the strongest and clearest. Your  
12 Honor had started to raise this at sidebar, the actual  
13 conclusion is typically dependent, as Mr. Petersohn alluded to  
14 as well, on the layouts of the other sites nearby, so map by  
15 map Mr. Donaldson would be testifying that his opinion is that  
16 the phone was likely in a geographical range that in part is  
17 informed by where the other sites are because if it were much  
18 closer to another site, it would more likely have connected to  
19 that one. So that's what we anticipate that the testimony will  
20 show.

21 THE COURT: I should remind everyone in that regard  
22 that the defense has not said otherwise; that the test under  
23 Daubert, the standard is still a-more-likely-than-not standard.  
24 It's not a-beyond-a-reasonable-doubt standard. The ultimate  
25 burden is beyond a reasonable doubt. But with respect to any

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1 given item of evidence, it simply has to meet the basic 401,  
2 402 standard if it's more likely than not to contribute to  
3 determining some issue in the case.

4 But let me hear finally from defense counsel.

5 MS. HARRIS: Your Honor, I recognize the Court has, I  
6 think, indicated which way it's leaning. I'm not going to  
7 belabor the point. The only thing I want to say, because I  
8 think it preserves what I believe to be anticipated argument  
9 down the road and sort of flag it for the Court, which is I  
10 believe that a Daubert evaluation should be in conjunction with  
11 the specific opinion that's being offered, right? You know,  
12 it's not just that -- there is a question, obviously, is this  
13 field or is this science relevant --

14 THE COURT: No. No. That's a good point. So here is  
15 what I think we should do. Forgive me for interrupting, but  
16 it's late.

17 I'm going to deny the Daubert motion with the  
18 following qualification: That the government needs to present  
19 to the Court and defense counsel in writing before the start of  
20 the trial a specific statement of what the ultimate opinion  
21 this witness will give and what the basis for that opinion is.  
22 A lot of that we heard, but I want it clarified for the very  
23 reasons you've just indicated so that he doesn't get on the  
24 stand and -- so, for example, I don't want to hear "tier one"  
25 at trial. And all of this, of course, is without prejudice to

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1 your 403 motion, which I'm simply reserving on for now.

2 But I think in light of the discussion here today and  
3 in light of my ruling now that he has satisfied -- that the  
4 government has satisfied the Daubert standard, we should have a  
5 re-casting in writing of exactly what his opinion is going to  
6 be and exactly what the basis for that opinion is.

7 Yes, sir?

8 MR. BALSAMELLO: May I just ask a qualifying question.  
9 Mr. Donaldson's presentation, I believe, is about 20 slides  
10 long, and each one of them is a different map. Some of them  
11 have just one location; some have three or four.

12 There's a general formulation I think his opinion will  
13 always take, which is that the phone was likely in the  
14 direction of the sector, a certain distance approximately  
15 equidistant to the nearest tower in that direction. We will  
16 obviously craft that more specifically and write it and be  
17 thorough, but would that sort of general framework as opposed  
18 to a slide-by-slide, one street at a time --

19 THE COURT: No. No. You don't have to give me all  
20 that. That's why we had this hearing, but what I'm thinking of  
21 are some of the points defense counsel I thought had scored on.  
22 I don't think the tier one, tier two formulation is of any use.  
23 I think it's confusing. I don't think the drive test, except  
24 in a limited respect brought out on redirect, should be part of  
25 the basis. The other drive tests were irrelevant, as near as I

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1 could tell.

2 Now, I don't agree with the defense that the mere fact  
3 that the drive tests were never recorded, and he doesn't  
4 remember much about them and all like that, is itself a ground  
5 for excluding reference to that; but the only relevant drive  
6 test, as near as I can see, were ones that were conducted, as I  
7 think he indicated on redirect, for the purpose of determining  
8 the adequacy of the connections in certain vicinities.

9 So, just to make clear what I'm saying, the fact that  
10 he doesn't have data on the drive tests that he conducted in  
11 the past is neither here nor there. That goes to weight, not  
12 to the admissibility. A plumber could get on the stand and  
13 say, "I've conducted a thousand examinations of cracked pipes  
14 and here's why they cracked," and the fact that he didn't keep  
15 a record of any of those goes to cross-examination weight but  
16 doesn't go to admissibility.

17 On the other hand, I didn't see the relevancy of the  
18 drive tests other than in the limited respect brought out on  
19 redirect. So if that is of guidance, I offer that.

20 MR. BALSAMELLO: It is, your Honor. I would note  
21 though, just to make sure that there is not confusion and that  
22 we are proceeding as the Court expects, our intention is at  
23 this point in the first instance to call only Mr. Donaldson.

24 THE COURT: Oh, just Mr. Donaldson?

25 MR. BALSAMELLO: Correct, that would be our intention

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1 at this time.

2 THE COURT: No, that I don't see at all. What's  
3 Mr. Donaldson -- Mr. Donaldson, when I questioned him in the  
4 Daubert hearing in the Nieves trial -- and I must admit my  
5 questions were more pointed than in earlier cases where I  
6 admitted his testimony because like every other judge, I get  
7 more educated as time goes on -- was, "Can you tell me anything  
8 about the physics of how this operates?" And the answer was,  
9 "Well, not really. I'm not an engineer. I don't -- you know  
10 I've read in books, none of which were expert treatises, just,  
11 you know, books, about how this supposedly operates." That's  
12 about pretty much all he could say.

13 MR. BALSAMELLO: I believe, your Honor, though  
14 Mr. Donaldson, I would submit, said a bit more than that, and  
15 that he did set forth essentially the same scientific  
16 principles that Mr. Petersohn did today.

17 THE COURT: But he wasn't a scientist. How did he  
18 know this? He only knew it by hearsay.

19 MR. BALSAMELLO: I would submit, your Honor, that  
20 Mr. Donaldson's testimony is then a matter of -- that he is  
21 plotting and mapping and following a process of analyzing the  
22 data. To the extent the Court was concerned with whether --

23 THE COURT: I am not going to exclude him, and if you  
24 think there's something he can add to this witness's testimony  
25 in other respects, that's fair game. I will consider the



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1 defense argument that it's too much and it carries too much  
2 weight and all that stuff, but I'm not likely to be convinced  
3 by that. So if you want to call them both, you can.

4 But I don't see how -- if the question were put to  
5 Mr. Donaldson -- and I haven't gone back and looked at the  
6 Nieves questions, so I'm doing this from memory, but if the  
7 question were now put to Mr. Donaldson, "What's the physics of  
8 how this operates? Tell me about wavelength. Tell me about  
9 how wavelength decreases with distance." He would either say,  
10 "I don't know" or he would say, "I don't know from my  
11 expertise, I only know because I read about it in some book."  
12 And that's not going to be sufficient to overcome a Daubert  
13 challenge. This witness does overcome a Daubert challenge, as  
14 I've already ruled, and this witness is your necessary  
15 predicate. If you then want to call Mr. Donaldson because you  
16 think he has additional things to add, that's fine.

17 MR. BALSAMELLO: I think actually then -- to use the  
18 phrasing your Honor just did -- Mr. Donaldson is the necessary  
19 predicate because he would be introducing simply the plotting  
20 of the CDRs. He took the latitudes and longitudes and put them  
21 on a map, which I would submit to your Honor does not require  
22 engineering expertise.

23 THE COURT: But if that's all you're going to do  
24 without telling how cell phones operate with cell towers, then  
25 I would have to exclude it because it only has meaning if you

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1 already know how cell phones and cell towers operate.

2 MR. BALSAMELLO: No, your Honor. What I'm submitting  
3 is that Mr. Donaldson would testify to put in those maps which  
4 produced to counsel, and he would authenticate that "I used  
5 CDRs, I put them on a map" --

6 THE COURT: Subject to hearing other non-Daubert  
7 objections, that's fine.

8 MR. BALSAMELLO: And Mr. Petersohn -- this is my  
9 thinking right now, obviously, but then Mr. Petersohn would  
10 then review those maps and be the one to opine about location.

11 THE COURT: I don't care about order.

12 MR. BALSAMELLO: Okay.

13 THE COURT: It all can be taken subject to connection,  
14 and I, of course, know what Mr. Petersohn is going to say, so  
15 the connection is not a hypothetical one, so to speak. But,  
16 you know, that's fine. Just don't seek to offer Mr. Donaldson  
17 on the science of cell phone location -- what cell phone and  
18 cell tower data shows about location. That you have to show  
19 through Mr. Petersohn, and then Mr. Donaldson can say, "And  
20 here is how it worked out in this case. I put a dot there. I  
21 drew a line there," whatever.

22 MR. BALSAMELLO: I do think, your Honor, I'll just  
23 take an another swing at it; that Mr. Donaldson, even if it is  
24 through his training, the conferences he's attended, his  
25 literature, his book learning on the matter, has specialized

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1 and technical skill. Mr. Petersohn confirmed, I believe for  
2 the Court, that the science Mr. Donaldson purports to have  
3 learned, and has learned, is in fact valid, accurate and  
4 reliable. That was our intention --

5 THE COURT: No. No. But the science comes with all  
6 sorts of qualifications. Just to take the most obvious thing.  
7 It doesn't -- the signal doesn't always go to the nearest  
8 tower. Why not?

9 MR. BALSAMELLO: I believe Mr. Donaldson could testify  
10 to that.

11 THE COURT: No. No. No. He would. He testified in  
12 a Daubert hearing in my court to that. He knows that's true  
13 from having read it, but he doesn't know the science of why  
14 that's true at all.

15 MR. BALSAMELLO: I would submit, your Honor, that to  
16 the extent Mr. Donaldson then on cross-examination were  
17 demonstrated to have a lack of direct knowledge about the  
18 precise underlying scientific principles, that would be an  
19 issue that could go to weight for the defense to argue.

20 THE COURT: I don't think so. That makes a mockery of  
21 Daubert.

22 MR. BALSAMELLO: Well, I would submit that Daubert is  
23 an admissibility standard, but that if Mr. Donaldson is  
24 testifying about principles that the Court has satisfied itself  
25 are accurate --

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1 THE COURT: No. No. No. So, let me make -- so  
2 there's a famous case involving whether bendectin, a drug,  
3 caused breast cancer, and there were -- this case went on for  
4 years. It was finally resolved by the district court in, I  
5 think, Alabama, concluding it did not cause breast cancer.

6 Now, you're saying that a witness could get on the  
7 stand and say, "I think bendectin causes breast cancer; that's  
8 my opinion."

9 "And what's the basis for your opinion?

10 "Well, it's something I read about in the National  
11 Enquirer, and that's my basis."

12 And that's would make Daubert a complete dead letter.

13 MR. BALSAMELLO: I would submit, your Honor, that  
14 Mr. Donaldson would not say he's learned these things from the  
15 National Enquirer.

16 THE COURT: I am sure of that, but I am also sure that  
17 he didn't get it from some learned treatise either.

18 MR. BALSAMELLO: I actually -- I would resist that,  
19 your Honor. I think he does -- knowing his office, I know he  
20 has textbooks and treatises.

21 THE COURT: Fine. Anyway, you take your chances.  
22 I've indicated my tentative ruling that if you don't call  
23 Petersohn, you're not going to get Donaldson, but, you know,  
24 you want to put it to the test, it will be an interesting test.

25 MR. BALSAMELLO: I have no intention of doing that,

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1 but it was a lively discussion. I appreciate it.

2 THE COURT: Okay. Very good.

3 Yes, ma'am.

4 MS. HARRIS: The only coda or sort of place holder  
5 with respect to this discussion that I wanted to note is that  
6 the issue of tier one, I do want -- I don't want it to fall  
7 totally by the wayside because I think it's an important point,  
8 and I think that Mr. Petersohn's testimony on this point is a  
9 little different than, frankly, Donaldson's has been in prior  
10 cases.

11 THE COURT: Well, if you want to introduce something  
12 that I've excluded the government from, of course you're  
13 welcome to. You then open the door, of course.

14 MS. HARRIS: No. No. No. I'm not trying to get  
15 labels in or jargon in or anything like that. I just want to  
16 note for the record that the opinion that Mr. Petersohn offered  
17 today, his expert opinion was that in the vast majority of  
18 cases, a cell phone user will connect to a cell site in tier  
19 one.

20 THE COURT: Yes, but after I questioned him, I  
21 reformulated that, and that's why I want the government to give  
22 you in advance -- it has to be at least the day before trial --  
23 exactly what he will now say. But that opinion after your  
24 excellent cross-examination, the government's excellent  
25 examination and my shoddy questioning, all reduce to vicinity

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1 and not tier one, tier two.

2 MS. HARRIS: That's fine. I'm not attached to the  
3 jargon, but it could be a group of cell sites, not the closest  
4 cell site.

5 THE COURT: Well, we'll see what they put in their  
6 opinion, and you're free to challenge the wording of that  
7 opinion if you think it is has departed too far from anything  
8 presented at this hearing. Okay.

9 MR. BALSAMELLO: Your Honor?

10 THE COURT: Yes.

11 MR. BALSAMELLO: Instead of a separate paper filing --  
12 and we can argue this later if your Honor would prefer also --  
13 I do think if Mr. Petersohn then is testifying, we'd move to  
14 preclude cross on that entire issue with the Pennsylvania case  
15 and the opinion of the magistrate judge just as confusing and  
16 irrelevant, frankly. I think your Honor --

17 THE COURT: I'm not going to rule now on what's  
18 permissible for cross-examination except that my hunch is that  
19 that magistrate judge's opinion is totally irrelevant, and we  
20 will -- but defense counsel can offer it and I can say  
21 something like "The objection is sustained" or something like  
22 that. So you all take your chances. So, I think we've  
23 concluded everything that we've needed to.

24 Yes?

25 MS. HARRIS: On a totally different subject, your

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1 Honor. I think we don't have any further issues on the  
2 motions.

3 I will note with respect to the warrant issue, it was  
4 confusing that there were two warrants for the same phone, but  
5 we -- the second warrant does establish a link to the  
6 particular phones seized.

7 THE COURT: Thank you for reminding me of that.

8 MS. HARRIS: I don't have much to say about this at  
9 all, Judge. I'm not going to open up argument on this.

10 I just wanted to note one thing for the record, the  
11 more significant thing I wanted to address today with everyone  
12 here relates to my client's custody situation. That's the  
13 biggest topic.

14 THE COURT: Yes. Yes. And we may want to have a  
15 little more discussion of that like the morning we pick the  
16 jury, but with respect to -- all I wanted to know now was  
17 whether you had any argument for suppression based on or  
18 relating to the March 20 warrant because otherwise the March 20  
19 warrant provided probable cause to search the phone and  
20 described the phone with, in my view, sufficient particularity.  
21 That's why I put the question.

22 MS. HARRIS: I agree with respect to that issue, your  
23 Honor. There was one sort of secondary issue that we raised  
24 even with respect to the first warrant, which I think still  
25 applies with respect to the second, which is an issue I often

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1 bring to the Court's attention in the warrants for cell phones,  
2 which is that the probable cause that was articulated relates  
3 to -- that this phone was used to communicate with the  
4 undercover who was purchasing narcotics, correct? So they knew  
5 that it was the phone that had been used to receive and make  
6 phone calls with this CI. And that's it.

7 And so probable cause is, of course, location  
8 specific, which means cell phones are not just like small  
9 objects any more. They're like an entire office or someone's  
10 personal office, and the question is if you have probable cause  
11 to seize records relating to those phone calls, do you have  
12 probable cause to rummage through photographs? Do you have  
13 probable cause to rummage through email accounts, when there's  
14 nothing about the probable cause that's been demonstrated in  
15 the warrant application that relates to those particular  
16 categories. It's almost like different file cabinets, right,  
17 in an office? It's even more than that because they're  
18 quantitatively different. It's not just a question of where it  
19 is.

20 So, at this juncture the government's only offering or  
21 appears to be offering text messages from the phone. I would  
22 preserve my objection to text messages that there's no  
23 demonstrative probable cause.

24 THE COURT: I'm glad you stated that on the record,  
25 and if things turn out differently than it now appears, we will



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1 have to reach that issue.

2 MS. HARRIS: That's really it with respect to the  
3 second warrant.

4 THE COURT: That's very helpful. All right.

5 Since I can't bear to let you go, I will mention very  
6 quickly my procedures for picking the jury.

7 We will be down in the jury room because of the  
8 pandemic. I will question the jurors basically to determine  
9 whether there's any reason to excuse a juror for cause. That's  
10 really what I'm concerned with. you're free to submit in  
11 advance proposed voir dire, but to tell you, and to be frank, I  
12 at this point after 25 years pretty much know which questions  
13 I'm going to ask and which I'm not. The defense will have ten  
14 peremptory; the government six. We will do this in rounds. In  
15 each round for the first four rounds, it will be one challenge  
16 for the government, two challenges for the defense. Then last  
17 two rounds, it's one and one.

18 Then we will pick three alternates. One round of  
19 challenges, but in those challenge there will be one challenge  
20 for the government, two challenges for the defense.

21 It usually takes me about between an hour and an hour  
22 and a half to pick a jury, never more than that, so we will  
23 then -- we will meet first in the courtroom, which is 24B at  
24 9:30 on the first day of trial. The jury panel is usually  
25 available by 10:30, so we can use that hour for anything else

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1 that we need to discuss. The jury will then be picked by about  
2 11:30 to 12:00. If it's closer to 12:00, we'll excuse them for  
3 an early lunch. If it's closer to 11:30, we'll go straight  
4 back to the courtroom.

5 Either way, we will have opening arguments. I never  
6 allow more than a half hour per side for opening arguments.  
7 You're welcome to have less than that, and often it is less  
8 than that, but the maximum is a half hour. Then we'll turn to  
9 the first witness. So the government should have their first  
10 witness ready to go.

11 Okay. Anything else we need to take up today? Yes?

12 MS. HARRIS: Yes, your Honor. So the issue I wanted  
13 to raise for the Court is that we found out, I think it was on  
14 Monday, right, that Mr. Scales was transferred from the MDC  
15 back to the MCC. And just by way of background, Mr. Scales for  
16 most of this time during the pendency of the case at the MCC.  
17 And literally about three or five days after we received the  
18 3500 material, which consists of, including over 4- to 500  
19 pages of little handwritten notes from the prosecutors  
20 detailing their various debriefings with the cooperating  
21 witnesses, he was placed in a quarantine unit at the MDC. And  
22 despite various entreaties and efforts by all parties, both the  
23 government and the defense, we weren't able to meet with him in  
24 person for two and a half weeks. We sort of took that in  
25 stride and doubled down --

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1 THE COURT: I'm sorry. Forgive me for interrupting  
2 which I have a terrible tendency to do, as you may have  
3 noticed. What's your application?

4 MS. HARRIS: The problem is I need to -- so, we've  
5 been reviewing and basically meeting with Mr. Scales three  
6 times a week for many hours every day because he cannot have  
7 the 3500 material with him in person, so we have to review it  
8 with him with one of us.

9 THE COURT: I understand. What's your application?

10 MS. HARRIS: Here's the issue. I don't know what the  
11 application is because we're at a loss what to do. He's now  
12 been transferred back to the MCC, and because of that --  
13 because of trial, obviously, but because of that, BOP policy is  
14 the put him on quarantine again. The government's been  
15 helpful. We both talked to Nicole McFarland at the MCC.

16 THE COURT: Is he vaccinated?

17 MS. HARRIS: He is not, your Honor.

18 THE COURT: That's because he's basically irrational,  
19 stupid, and absurd?

20 MS. HARRIS: Your Honor, I think that's -- given where  
21 he has been and what he's endured at the jail --

22 THE COURT: He feels that he should put himself and  
23 all his fellow prisoners in jeopardy of a serious illness?  
24 What's his reason for that? What's his reason?

25 MS. HARRIS: Your Honor, I --

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1 THE COURT: I think the reason is that he listens to  
2 the nonsense that permeates the jails and prisons of the United  
3 States, and that has already led to the death of many  
4 prisoners, than to science and rationality and common sense.  
5 So I suggest he gets vaccinated; but I can't order that. But I  
6 will certainly remember it if he fails to do so because if he  
7 should be convicted -- and I hope of course that he is  
8 acquitted if he is not guilty -- but if he should be convicted,  
9 I will have to consider what kind of human being he is, the  
10 kind who likes to put other people in jeopardy of disease.

11 MS. HARRIS: Can I --

12 THE COURT: What order would you like? I'm happy to  
13 sign any order you want to make him available to you under  
14 virtually any conditions you like, but you have to tell me what  
15 order you want.

16 MS. HARRIS: I want an order permitting us to visit  
17 during the requested scheduled visits that we had in place this  
18 week, which was Wednesday --

19 THE COURT: Prepare an order, submit it tomorrow; and  
20 if it looks fine, I will sign it.

21 MS. HARRIS: Your Honor, the other issue is the other  
22 aspect of the order is that he was taken from the MDC without  
23 told where he was going to go. He wasn't able to pack up his  
24 belongings. The government had sent discovery, which  
25 supposedly arrived at the MDC on Thursday, but never got into

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1 his hands.

2 THE COURT: Does the government know anything about  
3 this?

4 MR. BALSAMELLO: Last we heard, the MCC, Nicole  
5 McFarland, I believe it was, said they were tracking the  
6 packages. They were trying to locate them.

7 THE COURT: Here is what I will undertake to do for  
8 defense counsel.

9 First, present an order.

10 Second, assuming the order is fine, I'll sign it.

11 If there's still further problems or if you don't  
12 really know what to put in the order because you're uncertain,  
13 then I will call the warden and inquire on your behalf. All  
14 right?

15 MS. HARRIS: Yes, your Honor.

16 THE COURT: Anything else?

17 MR. BALSAMELLO: Not from the government.

18 MS. HARRIS: Nothing further, Judge.

19 THE COURT: Very good.

20 MS. HARRIS: I would just note that I think the  
21 story -- and I worked a lot with the inmates who were obviously  
22 at great risk during the pandemic, and I would note that the  
23 issues in the jail are very complicated with respect to the  
24 medical care, and so I just want to note that --

25 THE COURT: I have nothing but sympathy for all the

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1 tremendous hardships that prisoners were put to by the  
2 pandemic, and I have given that in writing as a reason for  
3 reducing sentences through compassionate release motions and  
4 also for not in brand new sentences imposing as great a  
5 sentence as I otherwise would impose. But I cannot understand  
6 why prisoners having lived through all those difficulties don't  
7 understand that the best thing they could do for themselves and  
8 for their fellow prisoners is to get vaccinated. That is truly  
9 in my view irrational and -- well, you hear what I'm saying.

10 MS. HARRIS: I do, your Honor. I understand, and  
11 obviously I share the view of the rational folks of the world  
12 who are vaccinated. I think with respect to individuals who  
13 are incarcerated and the trust and lack of trust of the  
14 healthcare system and the people who are guarding them, many of  
15 the guards themselves who are supposed to be the models didn't  
16 wear masks properly during much of the pandemic and the rates  
17 of vaccination among the guards is very low, so there is a  
18 culture that we don't share --

19 THE COURT: I agree, it's a --

20 MS. HARRIS: It's complicated.

21 THE COURT: No, I would say it's not complicated.  
22 It's really not complicated. What you're talking about is that  
23 in every society there are groups who would prefer for  
24 emotional reasons or because of suspicions or whatever to  
25 attach themselves to plainly despicable and irrational notions

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1 and then be able to say but that's the way I feel, that's  
2 what's important to me. Fine. But I won't hesitate to take it  
3 into account if there is a sentence in this case.

4 MS. HARRIS: I understand, Judge. And if and when  
5 that day comes, we can address this more fully, but I would  
6 just ask the Court not to prejudge his reasons for the  
7 circumstances that led to that; and if and when we get to that  
8 point, we'll certainly discuss it again.

9 THE COURT: Very good.

10 MS. HARRIS: Thank you, Judge.

11 (Adjourned)  
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